

City of Hattiesburg, MS

*200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401*



Meeting Agenda

Tuesday, November 22, 2016

5:00 PM

Council Chambers

City Council

I. Call to Order**II. Call to Prayer and Pledge of Allegiance****III. Agenda Order****IV. PRESENTATION AGENDA****V. POLICY AGENDA**

- V.1. 2016-58** Adopt an Ordinance for the petition filed by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, to change the zoning classification for certain property located at 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District. The Planning Commission recommended to APPROVE on November 2, 2016.

1. Ordinance - 2100 2206 2208 S 28th Ave Ext
2. November PC Minutes (DRAFT)
3. Image Sheet - S 28th Ave Exst - Zoning Change
4. Staff Summary - S 28th Ave Exst (Rezoning)
5. Applicant Sheet S 28th Ave Ext Rezoning
6. FGH Pine Grove Rezone Attachment Masterplan
7. FGH Pine Grove Rezone Attachment Survey
8. Letter of opposition - Charles Powers - 2008 S 28th Ave Ext

- V.2. 2016-59** APPROVE or DENY a petition filed by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.

1. November PC Minutes (DRAFT)
2. Image Sheet- Midtown - 301 S 28th Ave
3. Staff Summary - Midtown- 301 S 28th Ave
4. Applicant Sheets - 301 S 28th Ave
5. FGH Cancer Center Site Plan - Color
6. FGH Cancer Center Site Plan - Presented at HPC

- V.3. 2016-60** APPROVE or DENY a petition filed by John Anglin, Engineer, David Chunn, Owner, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1). The Planning Commission recommended to APPROVE on November 2, 2016.

1. November PC Minutes (DRAFT)
2. Image Sheet - 6623 Hwy 49 - Variance
3. Staff Summary - 6623 Hwy 49 - Variance
4. Applicant Sheet - 6623 Hwy 49
5. 6623 Hwy 49 - Prelim Site Plan

- V.4. 2016-61** APPROVE or DENY a petition filed by Rob O. Tatum, Jr, Owner, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.

1. November PC Minutes (DRAFT)
2. Image Sheet- Midtown - 3000 Hardy
3. Staff Summary - Midtown- 3000 Hardy Street
4. Applicant Sheet - G - 3000 Hardy St
5. 3000 Hardy St - Conceptual Design Variances
6. 3000 Hardy St - Revised Variance Calc

- V.5. 2016-62** APPROVE or DENY a petition filed by Rob O. Tatum, Jr, Owner, to request a variance from Article 3, Section 3.15.2 (B) which states a street-facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.

1. November PC Minutes (DRAFT)
2. Image Sheet- Midtown- 3000 Hardy St
3. Staff Summary - Midtown- 3000 Hardy Street
4. Applicant Sheet - H - 3000 Hardy St
5. 3000 Hardy St - Conceptual Design Variances
6. 3000 Hardy St - Revised Variance Calc

- V.6. 2016-63** APPROVE or DENY a petition filed by Rob O. Tatum, Jr, Owner, to request a variance from Article 3, Section 3.15.1 (F) which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.
1. November PC Minutes (DRAFT)
 2. Image Sheet- Midtown- 3000 Hardy St
 3. Staff Summary - Midtown- 3000 Hardy Street
 4. Applicant Sheet - I - 3000 Hardy St
 5. 3000 Hardy St - Conceptual Design Variances
 6. 3000 Hardy St - Revised Variance Calc
- V.7. 2016-65** Adopt a Resolution authorizing Requisition No. 60 from the Project Fund Construction Account in connection with certain loan agreement, dated as of December 19, 2013, by and between the Mississippi Development Bank and the City of Hattiesburg.
1. 2013 Bond Resolution No. 60
- V.8. 2016-66** Approve Acquisition and Relocation Policy for the South 28th Ave Bridge Replacement Project, and authorize Mayor to execute letter of Engagement authorizing Pittman, Howdeshell, Hinton & Hightower, PLLC, to perform legal services as required for said project.
1. Engagement Letter
 2. Acquisition & Relocation Policy
- V.9. 2016-68** Approve and Authorize Mayor to execute contract between the City of Hattiesburg and Thompson Brothers Drilling in the amount of \$ 459,000.00 for construction services related to the 1500 GPM Wesley Well No. 2 Project.
1. 1500 GPM Well 2 Contract
 2. Revised - 1500 GPM Well 2 Contract

- V.10. 2016-69** Approve and Authorize Mayor to execute contract between the City of Hattiesburg and Walters Construction in the amount of \$ 240,620.20 for construction services related to the Edwards Street to Hall Avenue Pathway Project.
1. Edwards St to Hall Ave Contract
 2. Revised - Edwards St. to Hall Ave. Contract
- V.11. 2016-71** Approve and Authorize Mayor to execute contract between the City of Hattiesburg and RJM McQueen Contracting, Inc. in the amount of \$ 292,692.68 for construction services related to the Tuscan Ave Sidewalk Project (Project No. STP 7197-00(002)/LPA 106879-701000).
1. Tuscan Ave Project Contract
 2. Revised - Tuscan Ave. Project Contract
- V.12. 2016-72** Approve and Authorize Mayor to execute contract between the City of Hattiesburg and Fairley Construction in the amount of \$ 209,456.48 for construction services related to the Safe Routes to School-Hawkins Sidewalk Project (Project No. SRSP 7207-00(004) LPA/106877-401000).
1. Hawkins Sidewalk Contract
 2. Revised - Hawkins Sidewalk Contract
- V.13. 2016-57** Authorize Mayor to execute a six-month contract with 98 West, LLC, for delivery of acceptable waste to its landfill or transfer station at a fee of \$7 per yard for approved Class I rubbish and \$3 per yard for 100% vegetative loads.
1. Waste Disposal Agreement 98 Waste

VI. ROUTINE AGENDA

- VI.1. 2016-67** Acknowledge receipt of request filed by Leonard Busby, III, Capturion Network, LLC, to appeal the Planning Commission's recommendation for the petition filed by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 AND to request a Use Permit Upon Review for a "Digital Billboard" as provided in Article 5, Section 95.10(3.1)(3) for a proposed Digital Billboard located on a certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3); (Hattiesburg Planning Commission recommended to DENY on November 3, 2016); Set a public hearing before City Council at 4:00 p.m. on December 19, 2016, and authorize publication of Public Notice of Appeal Public Hearing.
1. November PC Minutes (DRAFT)
 2. Appeal - 4041 Old Hwy 11 - 11-2-16 HPC
- VI.2. 2016-70** Acknowledge receipt of the unadvertised bid purchase docket for the period of September 29, 2016 through November 14, 2016, as provided for in Section 37-1-13(b) of the Mississippi Code 1972.
1. UAB MEMO
 2. UAB DOCKET
- VI.3. 2016-55** Approve the City's purchase of one (1) grave space, located in South Half (S1/2) of the Northwest Quarter (NW 1/4), Section 32, Lot 33, at Highland Cemetery (Minute Book# 2014-54) in the amount of \$ 175.00 to Opal Mitchell; authorize manual check for the same.
1. Buy Back (Opal Mitchell)
 2. Receipt (Opal Mitchell)
 3. Deed (Opal Mitchell)
- VI.4. 2016-56** Approve the sale of grave spaces per attached memo.
1. Deeds
 2. Receipts
- VI.5. 2016-73** Approve claims docket for the period ending November 18, 2016.
1. Docket

VII.



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-58

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Adopt an Ordinance for the petition filed by Dusti

Title: Adopt an Ordinance for the petition filed by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, to change the zoning classification for certain property located at 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District. The Planning Commission recommended to APPROVE on November 2, 2016.

Type: Ordinance

Drafter: Ginger Maddox

In Control: City Council

Reference:

Attachments: Ordinance - 2100 2206 2208 S 28th Ave Ext, November PC Minutes (DRAFT), Image Sheet - S 28th Ave Exst - Zoning Change, Staff Summary - S 28th Ave Exst (Rezoning), Applicant Sheet S 28th Ave Ext Rezoning, FGH Pine Grove Rezone Attachment_Masterplan, FGH Pine Grove Rezone Attachment_Survey, Letter of opposition - Charles Powers - 2008 S 28th Ave Ext

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

Prepared by: City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, MS 39403-1898
(601)545-4550

Return to: City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, MS 39403
(601)545-4550

INDEXING INSTRUCTIONS:

ORDINANCE NUMBER _____
OF THE
CITY OF HATTIESBURG, MISSISSIPPI

AN ORDINANCE CHANGING AND AMENDING THE COMPREHENSIVE ZONING DISTRICT MAP, ADOPTED AS PART OF THE COMPREHENSIVE ZONING ORDINANCE NO. 2330, AS AMENDED, OF THE CITY OF HATTIESBURG, MISSISSIPPI FOR A CERTAIN PROPERTY LOCATED AT 2100 S. 28TH AVENUE EXTENSION, 2206 S. 28TH AVENUE EXTENSION, & 2208 S. 28TH AVENUE EXTENSION (PARCEL 2-0390-20-005.00, PPIN 27240, PARCEL 2-0390-20-004.00, PPIN 27241, & PARCEL 2-0390-20-003.00, PPIN 27242, RESPECTIVELY, WARD 5) FROM ARTICLE 4, SECTION 52, R-1A (SINGLE-FAMILY RESIDENTIAL) DISTRICT TO SECTION 62, B-5 (REGIONAL BUSINESS) DISTRICT.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF HATTIESBURG, MISSISSIPPI:

SECTION 1. That the Comprehensive Zoning District Map, adopted as part of the Comprehensive Zoning Ordinance No. 2330, as amended, of the City of Hattiesburg, Mississippi, be and the same is hereby changed and amended. The Hattiesburg Planning Commission recommended to APPROVE said change in zoning for the following reasons:

There is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property.

Said properties are described as follows:

A parcel of land lying in the Northwest Quarter of the Southwest Quarter of Section 20, Township 4 North, Range 13 West, in the City of Hattiesburg, Forrest County, Mississippi and more particularly described as follows:

Commence at the Northeast corner of the Northwest Quarter of the Southwest Quarter of Section 20, Township 4 North, Range 13 West, thence run South 00 degrees 24 minutes 23 seconds West, a distance of 383.04 feet to a found ½" crimp top pipe for the Point of Beginning;

Thence run South 00 degrees 19 minutes 16 seconds West, a distance of 937.83 feet to a found old fence post and a point on the Northeast right-of-way of South 28th Avenue Extension; thence North 45 degrees 19 minutes 59 seconds West, a distance of 303.26 feet along said Northeast right-of-way of South 28th Avenue Extension to a found ¾” crimp top pipe; thence North 45 degrees 01 minute 32 seconds West, a distance of 338.87 feet along said Northeast right-of-way of South 28th Avenue Extension to a found ½” rebar; thence North 45 degrees 41 minutes 05 seconds West, a distance of 221.58 feet along said Northeast right-of-way of south 28th Avenue Extension to a found ½” rebar; thence North 42 degrees 16 minutes 55 seconds East, a distance of 259.94 feet along the Southeast right-of-way line of Victoria Drive to a found ½” rebar; thence South 45 degrees 42 minutes 09 seconds East, a distance of 228.76 feet to a found ½” rebar; thence North 43 degrees 17 minutes 59 seconds East, a distance of 409.14 feet to a found ½” crimp top pipe and back to the Point of Beginning, said parcel containing 272, 985 square feet (6.27) acres, more or less; together with all improvements thereon and appurtenances thereunto belonging.

LESS AND EXCEPT all of the oil, gas, and other minerals of like kind and character in, on, and under the above-described property which have been heretofore excepted, reserved, or conveyed by prior owners in the chain of title.

SECTION 2. Except as hereby expressly changed and amended, the aforesaid Comprehensive Zoning District Map and the Comprehensive Zoning Ordinance No. 2330, as amended, of said City of Hattiesburg, Mississippi, shall be and remain in full force and form as adopted.

SECTION 3. That this Ordinance take effect and be in force thirty (30) days from and after passage as provided by law.

The foregoing Ordinance having been reduced to writing, the same was introduced by Council member _____ seconded by Council member _____ and was adopted by the following vote to-wit:

YEAS:

NAYS:

THE President thereby declared the motion carried and the foregoing Ordinance adopted and approved, this the _____ day of _____ A.D., 2016.

(S E A L)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

THE above and foregoing Ordinance having been submitted to and approved by the Mayor, this the _____ day of _____ A.D., 2016.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
November 2, 2016**

The Hattiesburg Planning Commission did meet in a regular session on November 2, 2016 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Joseph White, Chairman, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Eric Martin
 Mark Miller
 Joseph White, Chairman

Commissioners Absent: Sandra Thompson
 Jessie Wilson

Also Present: Ginger Maddox, Planning Division Manager
 Melinda Green, Urban Development
 Armendia Esters, Planning Division

Chairman White declared the meeting of the Hattiesburg Planning Commission open and in session at 1:03 P.M.

INVOCATION

Commissioner White gave the invocation.

AGENDA REVIEW

There came the matter of the November 2016 Agenda. A request was made by Ginger Maddox, Planning Division Manager for a motion to remove Item E from the Agenda.

A request was made by Chairman White for a motion to approve the November 2016 Agenda with Item E removed from the Agenda. A motion was made to approve the November 2016 Agenda with Item E removed from the Agenda by Commissioner McMurtrey and seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Mark Miller
 Eric Martin

Commissioners voting nay: None

Commissioners abstaining: None

MINUTES REVIEW

There came the matter of the October 5, 2016 Minutes. A request was made by Chairman White for a motion to approve the October 5, 2016 minutes. A motion was made by Commissioner Corts to approve the minutes and seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Jessie Wilson

Commissioners voting nay: None

Commissioners abstaining: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report was provided to the commission of monthly and YTD Permit information for October, 2016.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox, Planning Division Manager. Ms. Maddox reported that there will be a Special Call session of the City Council to review the proposed Land Development Code. The Special Call will take place on November 28, 2016 at 4:00pm in Council Chambers. The Mayor and City Council have declared the month of October Planning Month for the city of Hattiesburg. The declaration aligns with the National recognition of October as Community Development and Planning Month. All other Planning Commission items, from October, were approved.

CHAIRMAN'S REPORT

There came the matter of the Chairman's Report. There was none.

PUBLIC HEARING

Chairman White declared the Public Hearing open at 1:18 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Variance), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 for a proposed Digital Billboard located on a certain property located at 4041 Old

Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	Leonard Busby, III	P.O. Box 6439	Laurel, MS
<u>Opponents:</u>	Norman Beasley	2055 Oak Grove Road	Hattiesburg, MS

Mr. Beasley stated that a new static billboard has been recently permitted for the Hwy 98/Old Hwy 11 intersection which would further prohibit Mr. Busby from meeting the required 1,250 radius required of all digital billboards. Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the petition. Commissioner Miller made a motion to deny the petition because special conditions and circumstances do not exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would not deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do result from the actions of the applicant; and that granting the variance requested will confer on the applicant special privileges that are denied by the code to other lands, structures, or buildings in the same district.

Commissioners voting aye: Dick Conville
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Eric Martin

Commissioners voting nay: Judy Corts

Commissioners abstaining: None

There came the matter of Item B (Use Permit Upon Review), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, remanded by the City Council on September 20, 2016, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a Use Permit Upon Review for a “Digital Billboard” as provided in Article 5, Section 95.10(3.1)(3) for certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Miller made a motion to deny the request because there is not public need for the proposed use, as opposed to the private interest of individual. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item C (Zoning Change), by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

	Name	Address	City/State
<u>Presented by:</u>	Dustin Gatlin	2203 Hardy Street	Hattiesburg, MS
	- Engineer, Walker Associates		
<u>Proponents:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
	- Forrest General Hospital		
<u>Opponents:</u>	Chad M. Sommers	125 Victoria Drive	Hattiesburg, MS
	Kendon Ellerman	108 Victoria Drive	Hattiesburg, MS

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because there is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property. The motion was seconded by Commissioner Corts.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item D (Variance), by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
<u>Proponents:</u>	Todd Jackson, ADP	One Convention Center Plaza	Hattiesburg, MS
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item F (Variance), by John Anglin, Engineer, David Chunn, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

	Name	Address	City/State
<u>Presented by:</u>	John Anglin Joe McMurry	6652 US Hwy 98 101 Hickory Circle	Hattiesburg, MS Petal, MS
<u>Proponents:</u>	None		

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item G (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item H (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item I (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.1 (F) which

states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

BUSINESS MEETING

There being no further business, Commissioner [REDACTED] made a motion to adjourn the meeting. The motion was seconded at Commissioner [REDACTED].

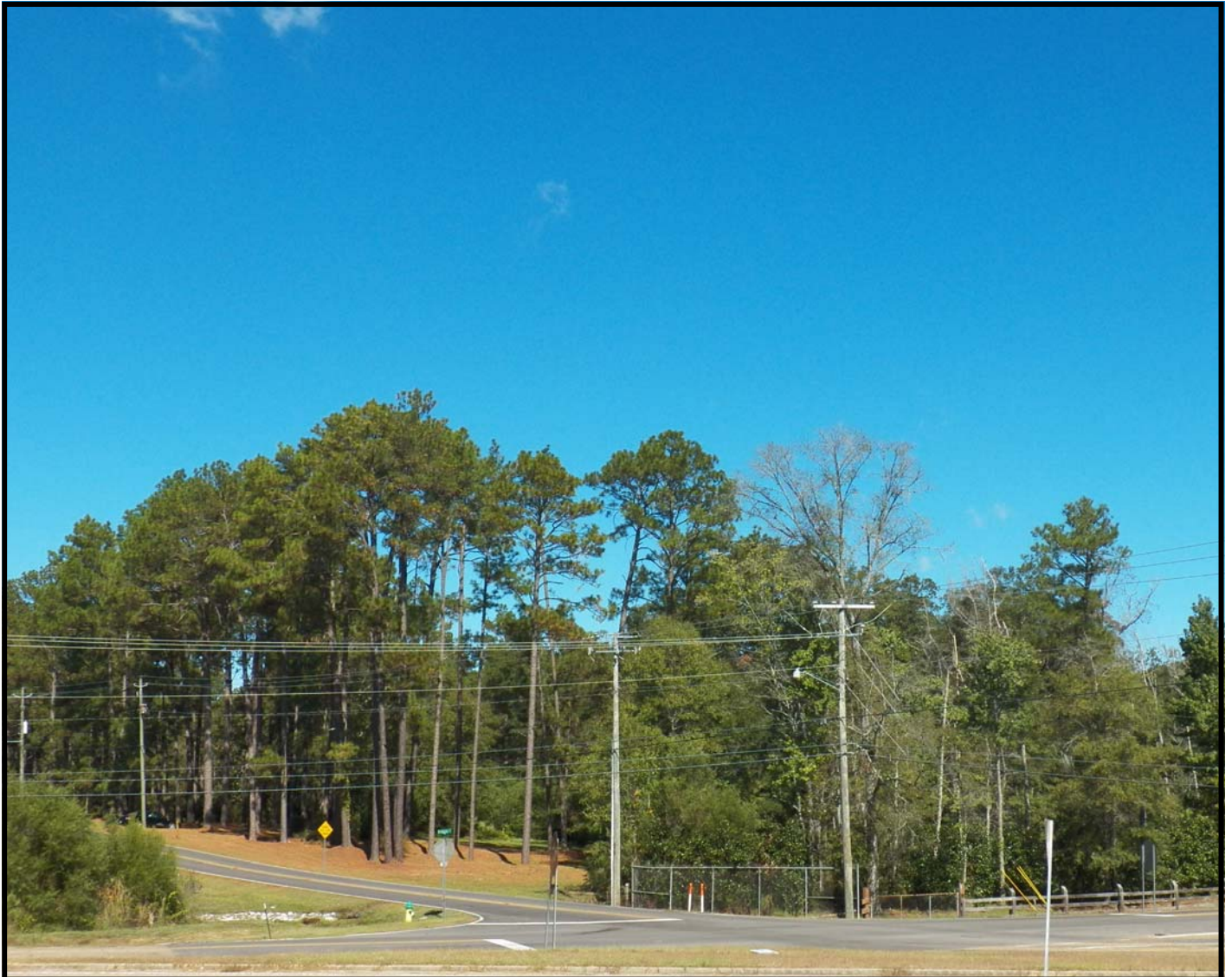
Joe White, Chairman

Pattie Brantley, AICP, Director of Urban Development.

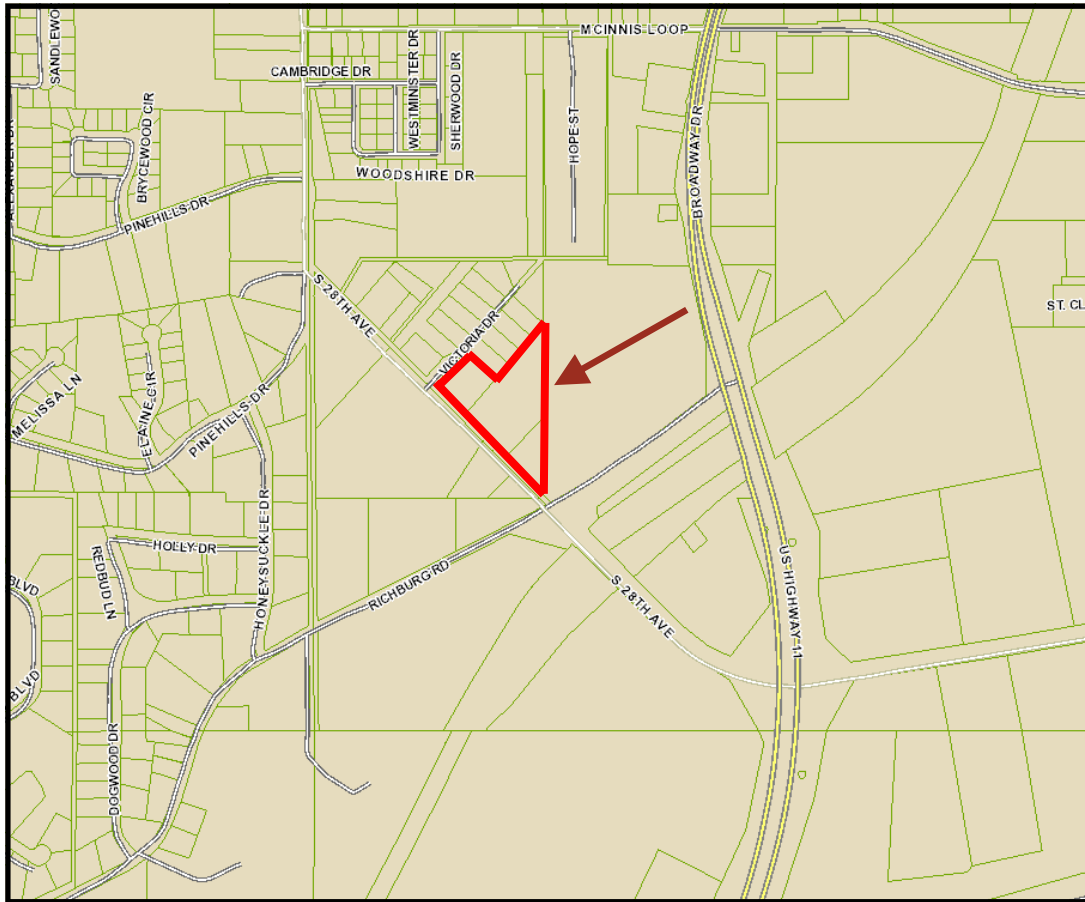
SUBJECT PARCEL: 2100, 2206, & 2208 S. 28th Ave. Ext.

Dustin Gatlin, Engineer, on behalf of
Doug Jones, COO, Forrest General Hospital, Owner

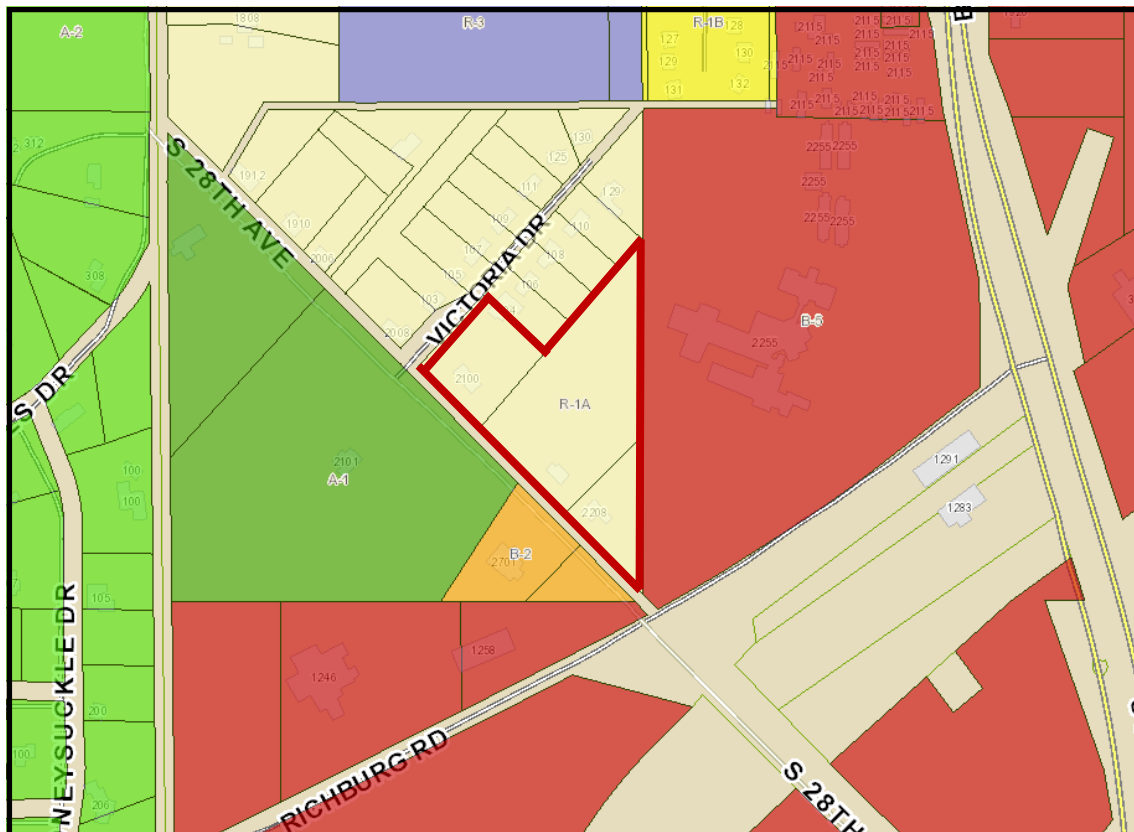
The applicant requests to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District



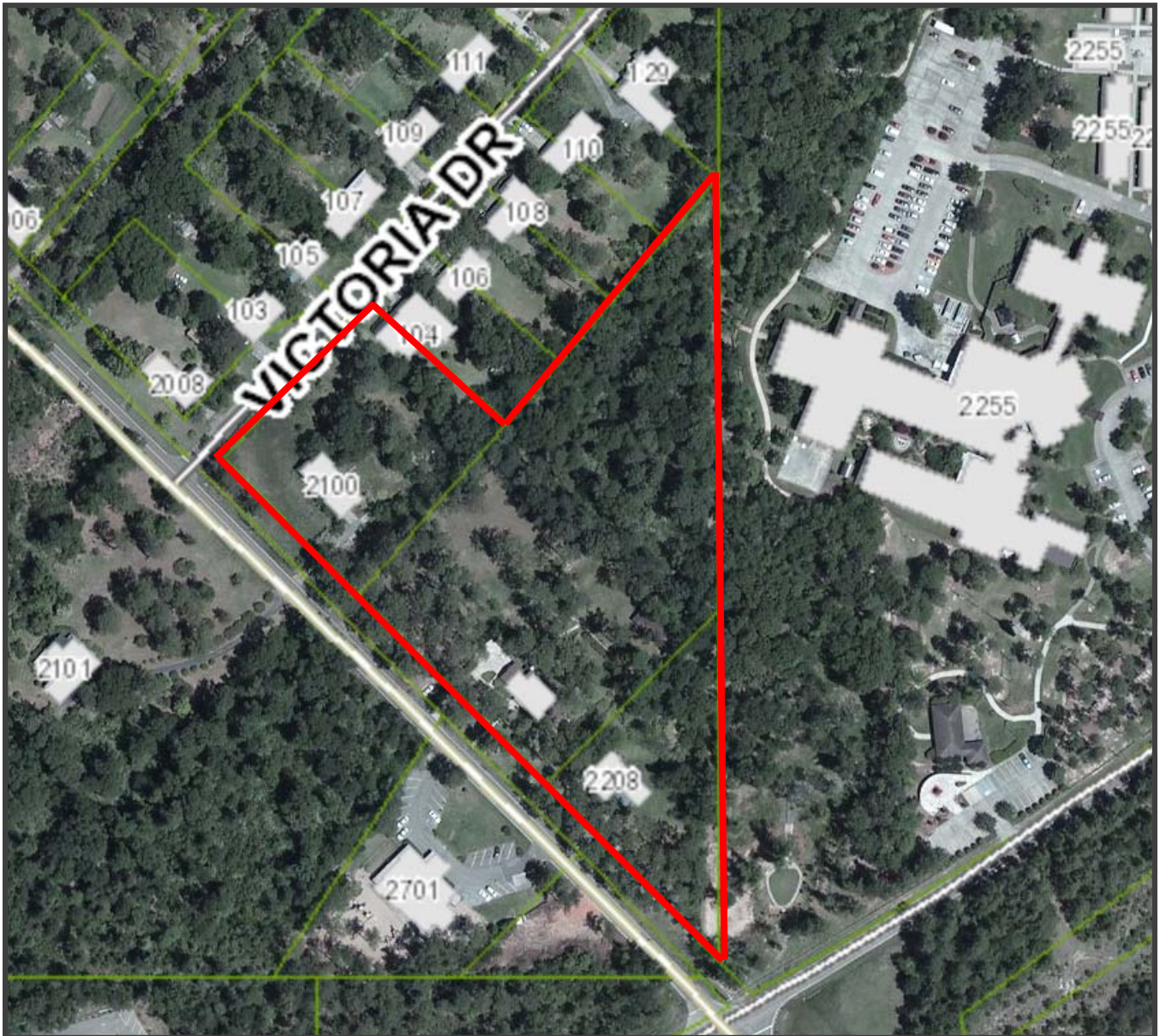
Vicinity Map—Ward 5



Zoning—R-1A



Site Aerial



SURROUNDING AREA

Northern Direction: R-1A (Single Family Residential) District / Residential



Southern Direction: B-5 (Regional Business) District / Undeveloped



Eastern Direction: B-5 (Regional Business) District / Pine Grove Hospital services



Western Direction: A-1 (General Agricultural) District & B-2 (Neighborhood Business) District / Residential, Funeral home





**Planning Commission
Case Fact Sheet**

Property Applicant: Dustin Gatlin, Engineer
Property Owner(s): Doug Jones, COO, Forrest General Hospital, Owner

Address of Property:	Tax Parcels/Ward:	PPIN:	Ward:
2100 S. 28th Avenue Extension	2-039O-20-005.00	27240	5
2206 S. 28th Avenue Extension	2-039O-20-004.00	27241	5
2208 S. 28th Avenue Extension	2-039O-20-003.00	27242	5

Requests: **Rezoning**

Purpose of Request: To consider an application to **change the zoning classification** for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

Applicant Summary: See Attached

Applicable Regulations:

SECTION 52

R-1A Single-Family Residential District - 10,000 Sq Ft

52.01 General Description: The principal use is for single-family dwellings and related recreational, religious and educational facilities normally required to provide the basic elements of a balanced and attractive residential area. These areas are intended to be defined and protected from the encroachment of uses not performing a function appropriate to the residential environment. Internal stability, attractiveness, order and efficiency are encouraged by providing for adequate light, air and open space for dwellings and related facilities and through consideration of the proper functional relationships of each element.

SECTION 62

B-5 Regional Business District

62.01 General Description: This business district is intended for the conduct of personal and business services for the motoring public.

Present Zoning: The Parcel is currently zoned R-1A Single-Family Residential District .

Present Use: Vacant/Undeveloped

Surrounding Zoning and Land Use:

North: R-1A (Single Family Residential) District / Residential
South: B-5 (Regional Business) District / Undeveloped
East: B-5 (Regional Business) District / Pine Grove Hospital services
West: A-1 (General Agricultural) District & B-2 (Neighborhood Business) District / Residential, Funeral home

Most Nearly Bounded By (streets): This parcel is accessible from the West by S. 28th Ave. Extension and the North by Victoria Drive. It is bounded to the South by Richburg Road and the East by Us Hwy 11.

Letters or Concerns stated: The Planning Division Office has not received any letters or other written communications relative to this case, as of **October 27, 2016**.

History / Background: This property was previously used as Single-Family residences. The property is currently vacant. It is immediately adjacent to the Pinegrove Health Services.

A Masterplan has been provided.

Rezoning Options: Recommend **approval** or **denial** of the request to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

Basis for Approval:

1. There **(is / is not)** a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property.
2. There **(is / is not)** a public need for the change in question, based on the Comprehensive Plan.
3. Annexation

Rezoning Information (1 page)

One of the following conditions must be met before a rezoning can be recommended.
Check the condition(s) most applicable to your request and explain in writing.

- A. There is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property and there is a public need for the change in question, based on the Comprehensive Plan.
- B. There is a mistake in the original zoning.
- C. Annexation

Detailed explanation of condition(s) most applicable to your request: (Please print or type.)

Pine Grove Behavioral Health & Addiction Services (hereafter referred to as Pine Grove) provides recovery and healing to a wide variety of patients. The following quotations are taken from the Pine Grove website (<http://www.pinegrovetreatment.com>) concerning the services provided.

"Pine Grove Behavioral Health & Addiction Services in Hattiesburg, MS understands lasting recovery and healing begins at the roots of who we are. Transformation is deeply woven into the core of each individual through broad reaching treatment options. As a result, we have gained a reputation as one of the nation's most comprehensive treatment campuses – drawing on cross-disciplinary expertise and multiple, whole-life treatment programs to effectively address the real complexities of life and addiction. Since 1984, Pine Grove has remained committed to being a leader in healing and changing lives, providing the highest quality behavioral health and addiction treatment services available... because life is for living. Pine Grove is Mississippi's largest drug and alcohol treatment center for psychiatric and addictive diseases with a variety of inpatient, outpatient, and residential programs. These services include the treatment of alcohol and drug abuse, disordered eating, sexual addiction, and psychiatric disorders."

Pine Grove currently has multiple facilities that are located outside of the main campus. To provide increased security and patient confidentiality, Pine Grove is interested in relocating existing, off-campus facilities to the main campus. The proposed master plan (enclosed with application) provides for increased security, increased patient confidentiality, better traffic management, and a better overall appearance of the campus.

To provide even greater levels of patient treatment, Pine Grove also desires to utilize the subject parcels for future expansion to provide treatment services that are not currently provided.

In summary, the rezoning of the parcels listed in this application will allow use of the parcels by Pine Grove for the relocation of existing, off-campus facilities and provide property for future treatment program facilities for life changing recovery and healing.

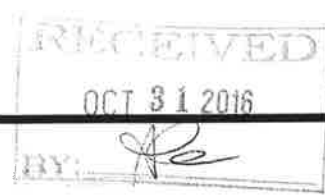
RECEIVED
SEP 09 2016
BY: *pe*



PRELIMINARY MASTER PLAN
**PINE GROVE
RECOVERY CENTER**
HATTIESBURG, MS

NORTH
SCALE: 1" = 50'
NOV. 2, 2015
PREPARED BY:
WEATHERSPRING/ALTAIR, LTD.

planning



From: charlespowers12345@comcast.net
Sent: Sunday, October 30, 2016 6:58 AM
To: planning
Subject: Re: November 2, 2016 Planning Commission Public Hearing Request

My name is Charles Herbert Powers. I own my home completely paid for at 2008 South 28th Ext, on the corner of Victoria and 28 EXT I oppose the building of the building of a Hospital or clinic directly across the road from me unless you can show me legal documentation stating how the re zone will benefit me

I enjoy sitting on my patio in the morning and at night some time seeing deer. Please do not take my serenity from me I am 60 years old only working part time So please Ms. Esters let me keep my peace and quiet....Sincerely Charles Powers

From: "planning" <planning@hattiesburgms.com>
To: charlespowers12345@comcast.net
Sent: Wednesday, October 19, 2016 3:29:25 PM
Subject: November 2, 2016 Planning Commission Public Hearing Request

Hello, Mr. Powers,

Please see attached Public Hearing Information.

Citizens are always encourage to attend the Public Hearing, or, if that is not possible, to send a letter via email, or hand-delivery to the Planning Office.

If you choose to send a letter, then please do so by next Friday.

Letters can be in recommendation for the project, or in objection to the project.

The project proposed is a hospital, and B-5 Zoning allows for the placement of a hospital without any special approval.

Thank you,

Armendia Esters
City of Hattiesburg
Urban Development/Planning
Office Manager
Phone 601.545.4599
Fax 601.545.1962
Email: planning@hattiesburgms.com
Website: www.hattiesburgms.com



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-59

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: 301 S. 28th Avenue - FBC Variance 3.5.2. (E)

Title: APPROVE or DENY a petition filed by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.

Type: Action Item

Drafter: Ginger Maddox

In Control: City Council

Reference:

Attachments: November PC Minutes (DRAFT), Image Sheet-Midtown - 301 S 28th Ave, Staff Summary - Midtown- 301 S 28th Ave, Applicant Sheets - 301 S 28th Ave, FGH Cancer Center Site Plan - Color, FGH Cancer Center Site Plan - Presented at HPC

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
November 2, 2016**

The Hattiesburg Planning Commission did meet in a regular session on November 2, 2016 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Joseph White, Chairman, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Eric Martin
 Mark Miller
 Joseph White, Chairman

Commissioners Absent: Sandra Thompson
 Jessie Wilson

Also Present: Ginger Maddox, Planning Division Manager
 Melinda Green, Urban Development
 Armendia Esters, Planning Division

Chairman White declared the meeting of the Hattiesburg Planning Commission open and in session at 1:03 P.M.

INVOCATION

Commissioner White gave the invocation.

AGENDA REVIEW

There came the matter of the November 2016 Agenda. A request was made by Ginger Maddox, Planning Division Manager for a motion to remove Item E from the Agenda.

A request was made by Chairman White for a motion to approve the November 2016 Agenda with Item E removed from the Agenda. A motion was made to approve the November 2016 Agenda with Item E removed from the Agenda by Commissioner McMurtrey and seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Mark Miller
 Eric Martin

Commissioners voting nay: None

Commissioners abstaining: None

MINUTES REVIEW

There came the matter of the October 5, 2016 Minutes. A request was made by Chairman White for a motion to approve the October 5, 2016 minutes. A motion was made by Commissioner Corts to approve the minutes and seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Jessie Wilson

Commissioners voting nay: None

Commissioners abstaining: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report was provided to the commission of monthly and YTD Permit information for October, 2016.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox, Planning Division Manager. Ms. Maddox reported that there will be a Special Call session of the City Council to review the proposed Land Development Code. The Special Call will take place on November 28, 2016 at 4:00pm in Council Chambers. The Mayor and City Council have declared the month of October Planning Month for the city of Hattiesburg. The declaration aligns with the National recognition of October as Community Development and Planning Month. All other Planning Commission items, from October, were approved.

CHAIRMAN'S REPORT

There came the matter of the Chairman's Report. There was none.

PUBLIC HEARING

Chairman White declared the Public Hearing open at 1:18 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Variance), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 for a proposed Digital Billboard located on a certain property located at 4041 Old

Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	Leonard Busby, III	P.O. Box 6439	Laurel, MS
<u>Opponents:</u>	Norman Beasley	2055 Oak Grove Road	Hattiesburg, MS

Mr. Beasley stated that a new static billboard has been recently permitted for the Hwy 98/Old Hwy 11 intersection which would further prohibit Mr. Busby from meeting the required 1,250 radius required of all digital billboards. Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the petition. Commissioner Miller made a motion to deny the petition because special conditions and circumstances do not exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would not deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do result from the actions of the applicant; and that granting the variance requested will confer on the applicant special privileges that are denied by the code to other lands, structures, or buildings in the same district.

Commissioners voting aye: Dick Conville
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Eric Martin

Commissioners voting nay: Judy Corts

Commissioners abstaining: None

There came the matter of Item B (Use Permit Upon Review), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, remanded by the City Council on September 20, 2016, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a Use Permit Upon Review for a “Digital Billboard” as provided in Article 5, Section 95.10(3.1)(3) for certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Miller made a motion to deny the request because there is not public need for the proposed use, as opposed to the private interest of individual. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item C (Zoning Change), by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

	Name	Address	City/State
<u>Presented by:</u>	Dustin Gatlin	2203 Hardy Street	Hattiesburg, MS
	- Engineer, Walker Associates		
<u>Proponents:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
	- Forrest General Hospital		
<u>Opponents:</u>	Chad M. Sommers	125 Victoria Drive	Hattiesburg, MS
	Kendon Ellerman	108 Victoria Drive	Hattiesburg, MS

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because there is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property. The motion was seconded by Commissioner Corts.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item D (Variance), by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
<u>Proponents:</u>	Todd Jackson, ADP	One Convention Center Plaza	Hattiesburg, MS
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item F (Variance), by John Anglin, Engineer, David Chunn, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

	Name	Address	City/State
<u>Presented by:</u>	John Anglin Joe McMurry	6652 US Hwy 98 101 Hickory Circle	Hattiesburg, MS Petal, MS
<u>Proponents:</u>	None		

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item G (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item H (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item I (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.1 (F) which

states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

BUSINESS MEETING

There being no further business, Commissioner [REDACTED] made a motion to adjourn the meeting. The motion was seconded at Commissioner [REDACTED].

Joe White, Chairman

Pattie Brantley, AICP, Director of Urban Development.

SUBJECT PARCEL:

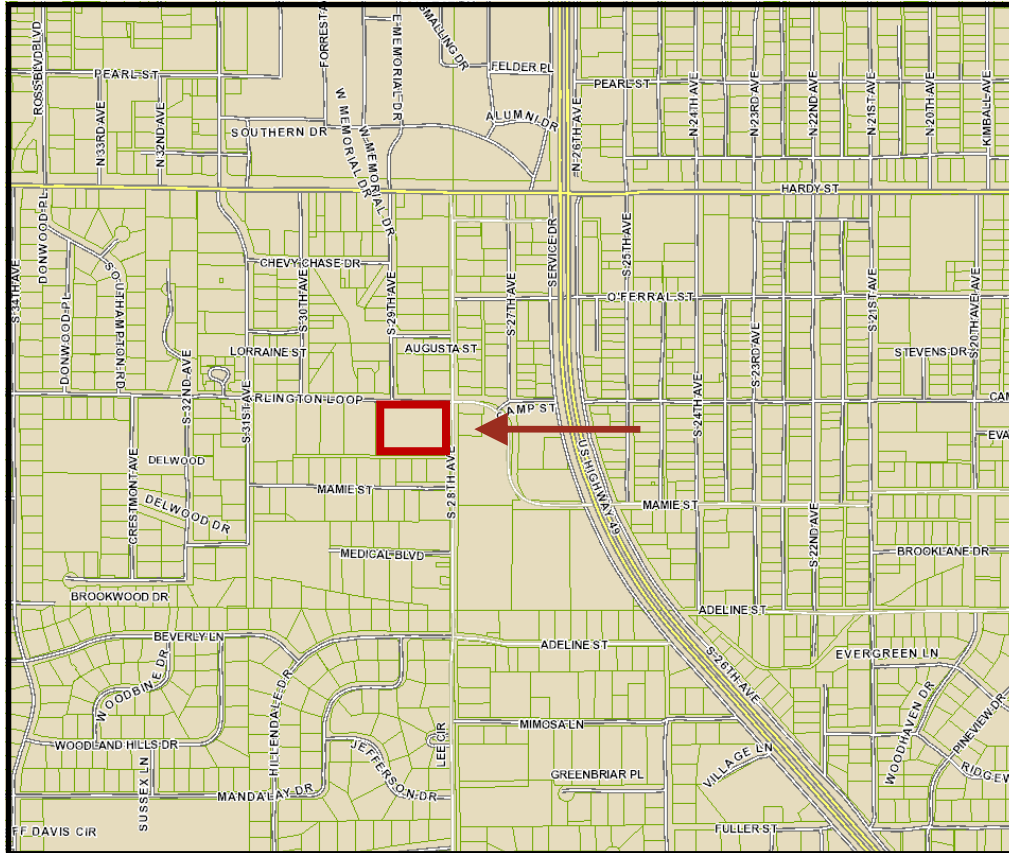
301 S. 28th Avenue

Phillip Perkins, Architect, Doug Jones, COO,
Forrest General Hospital, Owner

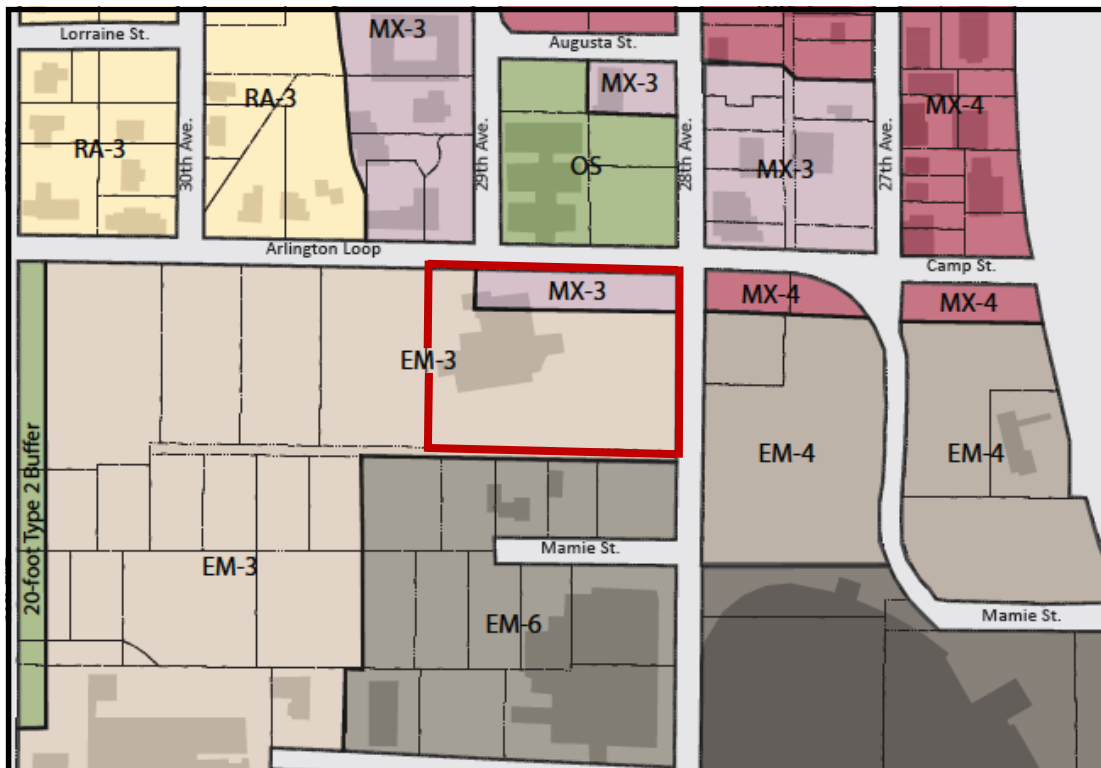
The applicant requests a variance from Midtown Form-Based Code Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet & a variance from Midtown Form-Based Code Article 3, Section 3.17.L.4. which states the transparency of glass should be higher than 80% and the reflectance should be less than 15% and instead allow a transparency of 19% and a reflectance of 37% for a transparency variance of 61% and a reflectance variance of 22% for certain property located at 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).



Vicinity Map—Ward 3



Zoning—MX-3 & EM-3

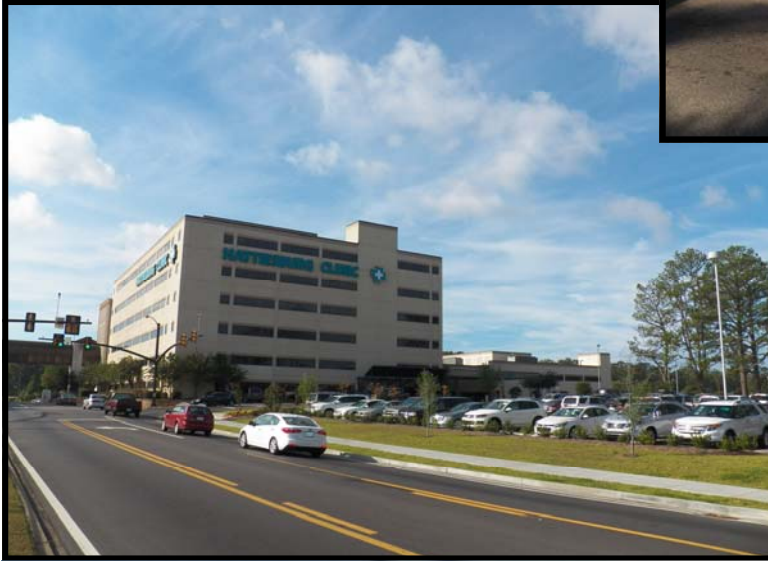


Site Aerial



SURROUNDING AREA

Northern Direction: OS: Open Space / Vacant, Parking, Offices



Southern Direction: EM-6:
Employment 6-Story / Parking



Eastern Direction: EM-4:
Employment 4-Story / Parking



Western Direction: EM-3:
Employment 3-Story / Offices

C20

SHEET NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO.

DATE

SCALE

DRAWN BY

CHECKED BY

PROJECT NO. 16-0208
(TWA 154-16)
DATE: AUGUST 2016
SCALE: AS SHOWN
DRAWN BY: JFW
CHECKED BY: CBO
REVISIONS: 9/1/16

SHEET TITLE
Site Layout



CANCER CENTER RENOVATIONS AND ADDITIONS 2016

FORREST GENERAL HOSPITAL
HATTIESBURG, MISSISSIPPI

PERKINS & WILLIAMSON
ARCHITECTS, PLLC

4200 Main Street, Suite 210
Hattiesburg, Mississippi 39402
601-545-2464 Office
601-545-2426 Fax
info@perkinswilliamson.com

SITE PLAN LEGEND:

- PROPERTY LINE
- BUILD TO ZONE
- BUILDING ADDITION EXTENTS
- BUILDING RENOVATION EXTENTS

SITE LAYOUT

ARLINGTON LOOP





**Planning Commission
Case Fact Sheet**

Property Applicant: Phillip Perkins, Architect
Property Owner: Doug Jones, COO, Forrest General Hospital, Owner

Address of Property: 301 S 28th Ave. **Tax Parcels/Ward:** 2-028N-07-241.00 **PPIN:** 17799 **Ward:** 3

Requests: **2 Variances from the Midtown Form-Based Code**

Purpose of Request: To consider an application to request a **variance from Article 3, Section 3.5.2. (E)** which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet & a **variance from Article 3, Section 3.17.L.4.** which states the transparency of glass should be higher than 80% and the reflectance should be less than 15% and instead allow a transparency of 19% and a reflectance of 37% for a transparency variance of 61% and a reflectance variance of 22% for certain property located at 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

Applicant Summary: See Attached

Applicable Regulations:
SECTION 3.5

General Building

2. Placement

Build-to Zone (BTZ) - (E) Build-to Zone on the Primary street (min/max) – 5' to 20'

SECTION 3.17 Rules for All Building Types

L. Transparency

4. Glass is considered transparent where it has a transparency higher than 80% and external reflectance of less than 15%.

Present Zoning: This parcel is zoned MX-3 (Mixed Use) 3-Story and EM-3
pg. __

Employment 3-Story.

Present Use: Forrest General Hospital Cancer Center

Surrounding Zoning and Land Use:
North: OS: Open Space / Vacant, Parking, Offices
South: EM-6: Employment 6-Story / Parking
East: EM-4: Employment 4-Story / Parking
West: EM-3: Employment 3-Story / Offices

Most Nearly Bounded By (streets): This parcel is accessible from the North by Arlington Loop, from the East by S. 28th Avenue. It is bounded to the South by Mamie Street and the West by S. 31st Avenue.

Letters or Concerns stated: The Planning Division Office has not received any letters or other written communications relative to this case, as of October 27, 2016

History / Background: This development has started the Site Plan Review process by the Midtown Development Review Committee.

Variance Option for Item D: Recommend **approval** or **denial** to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for certain property located at 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

Variance Option for Item E: Recommend **approval** or **denial** to request a variance from Article 3, Section 3.17.L.4. which states the transparency of glass should be higher than 80% and the reflectance should be less than 15% and instead allow a transparency of 19% and a reflectance of 37% for a transparency variance of 61% and a reflectance variance of 22% for certain property located at 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

Basis for Approval: 1. That special conditions and circumstances (**do / do not**) exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district;

2. That literal interpretation of the provisions of this Code (**would / would not**) deprive the applicant of rights commonly enjoyed by

other properties in the same district under the terms of this Code;

3. That the special conditions and circumstances **(do / do not)** result from the actions of the applicant;

4. That granting the variance requested **(will / will not)** confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

Note: No nonconforming use of neighboring lands, structures, or buildings in the same district, and no permitted or nonconforming use of lands, structures, or buildings in other districts shall be considered grounds for the issuance of a variance.

1. List reasons why you feel that the property could not be reasonably used without the requested

variance: A variance is needed to enable the existing facility to grow and better serve the
community at large.

2. All of the following conditions must be met before a variance can be recommended.

Explain and justify your proposal's compliance with each condition:

- a. That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district.

The existing building was constructed in 1997 and was essentially bound by two public roads and major water shed forming a triangle shape of available land in which to build the original building, necessary parking and still include adequate landscaping areas within this shape. The building itself is a healthcare occupancy specifically designed for the treatment of those affected by cancer which is a debilitating illness. With that in mind, the original design is compact and efficient from patient drop-off to point of care limiting travel distance and maximizing exposure to daylight and views to patients and staff.

- b. That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code.

Building to literal interpretation of the new code will undermine a great deal of the original intent, for example causing major disruption of everyday activities of multiple tenants.

- c. That the special conditions and circumstances do not result from the actions of the applicant.

The existing building and site was designed according to applicable codes at the time and has served the community well. The design intent of this addition is to seamlessly add the necessary growth the facility needs without compromising the integrity of the original design and the service the facility is currently providing to patients.

- d. That granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

Granting this variance would allow the existing facility to grow and better serve the community without severely compromising the original design intent and the level of care currently afforded patients. The design of the addition is small, efficient, and relatively non-intrusive on the existing site.

Note: No nonconforming use of neighboring lands, structures, or buildings in the same district, and no permitted or nonconforming use of lands, structures, or buildings in other districts shall be considered grounds for the issuance of a variance.

1. List reasons why you feel that the property could not be reasonably used without the requested

variance: A variance is needed to enable the existing facility to grow and better serve the
community at large.

2. All of the following conditions must be met before a variance can be recommended.

Explain and justify your proposal's compliance with each condition:

- a. That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district.

The existing building has a very specific rhythm and aesthetic, to goal to match the aesthetic calls for very specific requirements. The individual components that form this buildings specific character have been considered including, matching the existing brick and mortar, window rhythm, size, frame color, window tint (transparency of 19%/reflectance of 37%), and placement.

- b. That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code.

Maintaining a seamless addition to the existing building aesthetic has been a design consideration throughout the design process. Ample effort has been set forth to maintain the integrity of the existing building and the property's presence within the community.

- c. That the special conditions and circumstances do not result from the actions of the applicant.

The design intent of this addition is to seamlessly add the necessary growth the facility needs without compromising the integrity of the original design.

- d. That granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

Each existing building has binding limitations for an addition due to decisions made prior to the implementation of this Code, therefore the decisions being made for this particular project have been made to protect and join with the original design intent.

SITE LAYOUT

MX-3 DATA:

Lot Dimensions
A Lot area (min) - 5,000
SF
B Lot width (min) - 50'

Lot Parameters
% of outdoor amenity
space (min) - 10%

Building Setbacks

A Primary street (min) - 0'
B Side street (min) - 0'
C Side interior (min) - 0'
or 5'
D Side interior, abutting
protected district, RA-3
or RD-2 (min) - 10'
D Rear (min) - 0' or 5'
D Rear, abutting
protected district, RA-3 or
RD-2 (min) - 20'
D Abutting alley (min) - 5'

Build-to Zone (BTZ)

E Primary street
(min/max) - 0' to 10'
F Building in primary
street BTZ (min % of lot
width) - 70%
G Side street (min/max) -
0' to 10'
H Building in side street
BTZ (min % of lot width) -
35%

Parking Location

On-site parking not
allowed between the
building and the street

Greenspace Calculations:

Existing Greenspace Calculations:
existing impervious = 84,538 sq. ft.
existing greenspace = 80,721 sq. ft.
existing percent impervious = 51.2%
existing percent greenspace = 48.8%

Property & Zoning Data:

Physical Address: 301 S 28th Avenue
Forrest County, Hattiesburg, MS
Parcel: 028N-07-241.00
PPIN: 17799
Owner - Forrest General Hospital
Zoning: EM-3 & MX-3
Adjacent parcels zoning:
North Side: Arlington Loop
South Side: EM-6 (Hattiesburg Clinic, P.A.)
East Side: South 28th Avenue
West Side: EM-3 (Hattiesburg Clinic, P.A.)

Parking Data:

existing spaces = 104
proposed spaces = 106

Flood Zone Data:

Property is located in flood zone "X" per FEMA map # 28035C0104D, panel 104 of
300 (dated March 2, 2010). Areas determined to be outside the 0.2%
annual chance floodplain.

General Site Layout Notes:

1. Contractor will be responsible for all layout of the work. The Engineer shall
provide the contractor bench marks, control points, and an autocad file (after
execution of an electronic disclosure as provided by The Walker Associates,
Engineers-Planners-Designers, PLLC) for use in layout. All layout shall be performed
by a registered Professional Surveyor (cost paid by contractor).

Building Height
A Building height (max)
MX-3 3 stories/45'
MX-4, EM-4 4 stories/55'
MX-5 5 stories/67'
Reduced height may be
required when abutting a
protected district (see
Sec. 3.17.O)
B Building height (min) 2
stories

Story Height

C Ground floor elevation
0'
D Ground story height,
floor to ceiling (min) 13'
E Upper story height,
floor to ceiling (min) 9'

Transparency

A Ground story (min) 60%
B Upper story (min) 20%
C Blank wall area (max)
30%
The street-fronting,
street-level
window pane surface
area must allow
views into the ground
story use for a
depth of at least 8 feet.

Pedestrian Access

D Entrance facing primary
street req'd
E Entrance spacing along
primary street
(max) 75'

Permitted Building

Elements
Porch No
Stoop No
Balcony Yes
Gallery Yes
Awning/Canopy Yes
Forecourt Yes

Proposed Greenspace Calculations:
proposed impervious = 89,659 sq. ft.
proposed greenspace = 75,600 sq. ft.
proposed percent impervious = 54.3%
proposed percent greenspace = 45.7%

ARLINGTON LOOP

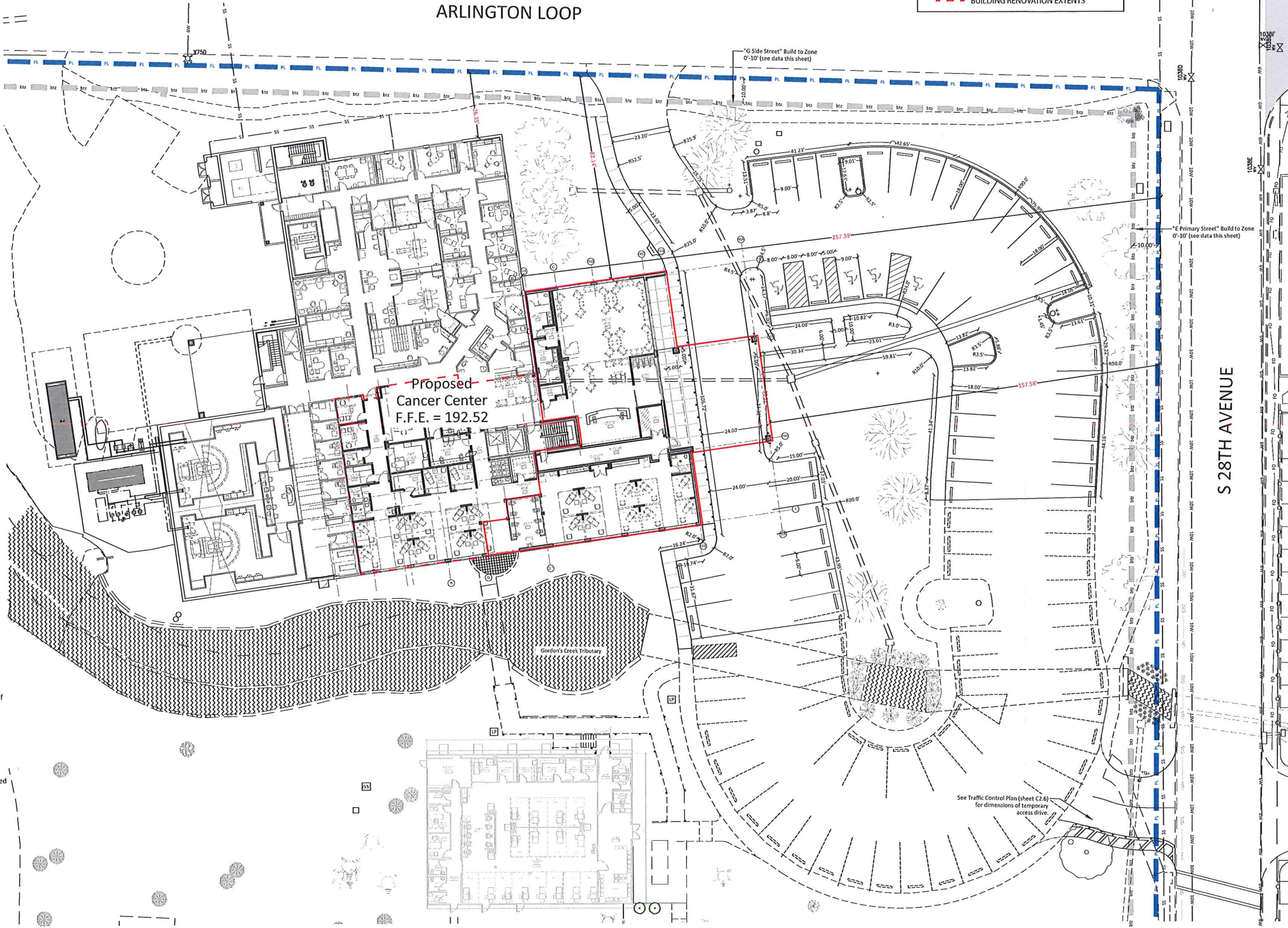
SITE PLAN LEGEND:

PROPERTY LINE

BUILD TO ZONE

BUILDING ADDITION EXTENTS

BUILDING RENOVATION EXTENTS



S 28TH AVENUE

4200 Main Street, Ste. 210
Hattiesburg, Mississippi 39402
PERKINS & WILLIAMSON
ARCHITECTURE, PLLC
Phillip Perkins, Architect
Charlie Williamson, Architect
601-545-2464 Office
601-545-2406 Fax
info@perkinswilliamson.com

**CANCER CENTER RENOVATIONS
AND ADDITIONS 2016**
FORREST GENERAL HOSPITAL
HATTIESBURG, MISSISSIPPI



SHEET TITLE:
Site Layout

PROJECT NO.: 16-9328
(TWA 154-16)
DATE: AUGUST 2016
SCALE: AS SHOWN
DRAWN BY: JTW
CHECKED BY: DBG
REVISIONS: 9/13/16

SHEET NO.:

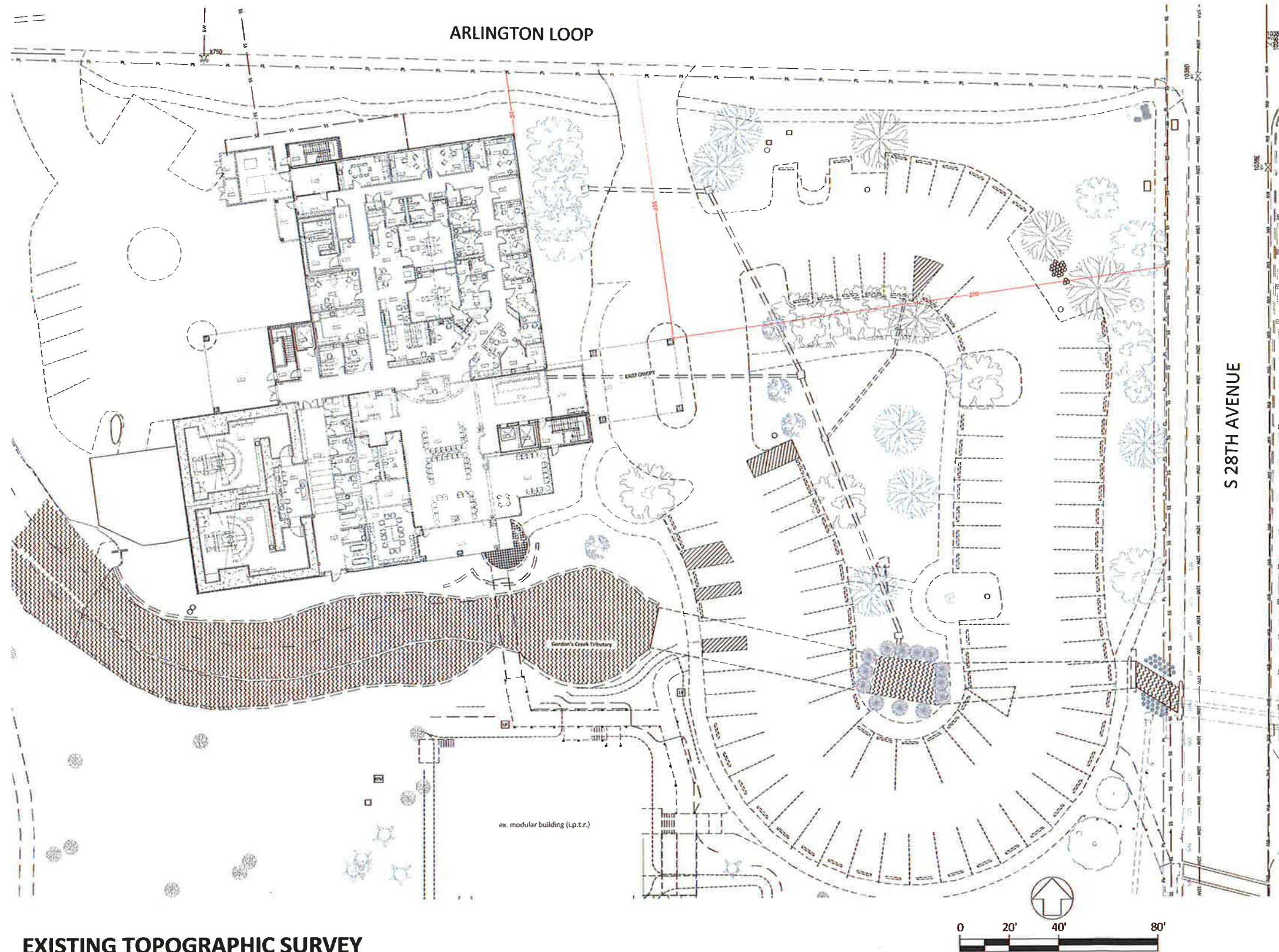
C2.0

PERKINS & WILLIAMSON
ARCHITECTURE, PLLC

2203 HARDY STREET, HATTIESBURG, MS 39401 601/583-2127

Revisions 9/13/16

1. S-Bike Rack Location See Addendum #2 For Details
2. See Mechanical plans for details this area
3. Temporary Traffic Delineators See Addendum #3 For Details



PERKINS & WILLIAMSON
 ARCHITECTURE, PLLC
 PHILLIP PERKINS, ARCHITECT
 CHARLIE WILLIAMSON, ARCHITECT
 4200 MAMIE STREET, SUITE 210
 HATTIESBURG, MISSISSIPPI 39402
 601-545-2464 OFFICE
 601-545-2406 FAX

**CANCER CENTER 1ST FLOOR
 RENOVATIONS AND ADDITIONS
 FORREST GENERAL HOSPITAL**

**MIDTOWN VARIANCE APPLICATION:
 BTZ: BUILD-TO-ZONE**



Provided at HPC meeting

MX-3 DATA:

Lot Dimensions
A Lot area (min) - 5,000 SF
B Lot width (min) - 50'

Lot Parameters
% of outdoor amenity space (min) - 10%

Building Setbacks
A Primary street (min) - 0'
B Side street (min) - 0'
C Side interior (min) - 0' or 5'
C Side interior, abutting protected district, RA-3 or RD-2 (min) - 10'
D Rear (min) - 0' or 5'
D Rear, abutting protected district, RA-3 or RD-2 (min) - 20'
D Abutting alley (min) - 5'

Build-to Zone (BTZ)
E Primary street (min/max) - 0' to 10'
F Building in primary street BTZ (min % of lot width) - 70%
G Side street (min/max) - 0' to 10'
H Building in side street BTZ (min % of lot width) - 35%

Parking Location

On-site parking not allowed between the building and the street

Greenspace Calculations:

Existing Greenspace Calculations:
existing impervious = 84,538 sq. ft.
existing greenspace = 80,721 sq. ft.
existing percent impervious = 51.2%
existing percent greenspace = 48.8%

Property & Zoning Data:

Physical Address: 301 S 28th Avenue
Forrest County, Hattiesburg, MS
Parcel: 028N-07-241.00
PPIN: 17799
Owner - Forrest General Hospital
Zoning: EM-3 & MX-3
Adjacent parcels zoning:
North Side: Adlington Loop
South Side: EM-5 (Hattiesburg Clinic, P.A.)
East Side: South 28th Avenue
West Side: EM-3 (Hattiesburg Clinic, P.A.)

Parking Data:

existing spaces = 104
proposed spaces = 106

Flood Zone Data:

Property is located in flood zone "X" per FEMA map H 28035C0104D, panel 104 of 300 (dated March 2, 2010). Areas determined to be outside the 0.2% annual chance floodplain.

General Site Layout Notes:

1. Contractor will be responsible for all layout of the work. The Engineer shall provide the contractor bench marks, control points, and an autocad file (after execution of an electronic disclosure as provided by The Walker Associates, Engineers-Planners-Designers, PLLC) for use in layout. All layout shall be performed by a registered Professional Surveyor (cost paid by contractor).

LEGEND:

- PROPERTY LINE
- BUILD TO ZONE
- BUILDING ADDITION EXTENTS
- BUILDING RENOVATION EXTENTS
- EXISTING VERTICAL CIRCULATION TO REMAIN

Building Height

A Building height (max)
MX-3 3 stories/45'
MX-4, EM-4 4 stories/55'
MX-5 5 stories/67'
Reduced height may be required when abutting a protected district (see Sec. 3.17.D)
B Building height (min) 2 stories

Story Height

C Ground floor elevation 0'
D Ground story height, floor to ceiling (min) 13'
E Upper story height, floor to ceiling (min) 9'

Transparency

A Ground story (min) 60%
B Upper story (min) 20%
C Blank wall area (max) 30%

The street-fronting, street-level window pane surface area must allow views into the ground story use for a depth of at least 8 feet.

Pedestrian Access

D Entrance facing primary street req'd
E Entrance spacing along primary street (max)

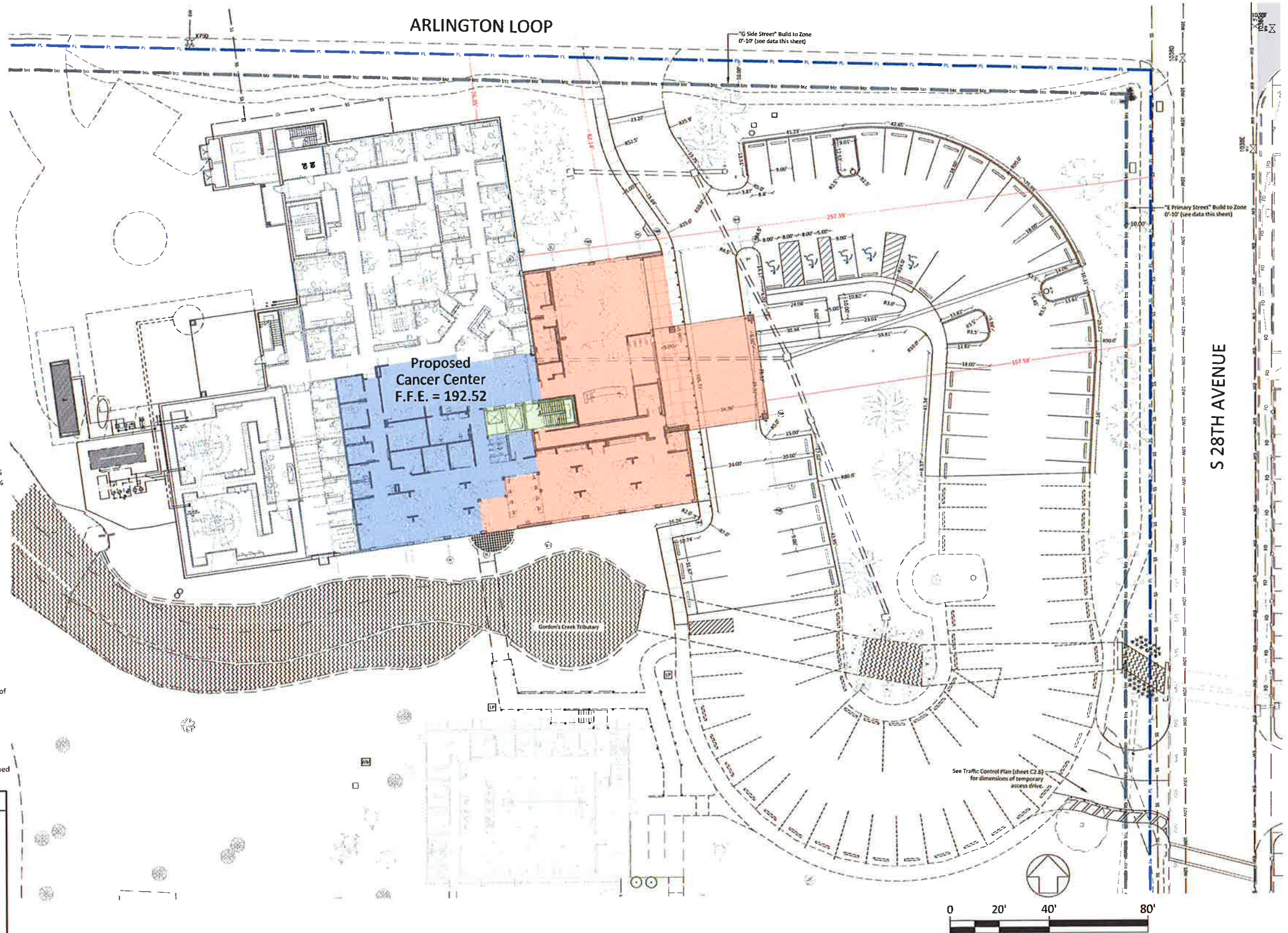
Permitted Building Elements

Porch No
Stoop No
Balcony Yes
Gallery Yes
Awning/Canopy Yes
Forecourt Yes

Proposed Greenspace Calculations:

proposed impervious = 89,659 sq. ft.
proposed greenspace = 75,600 sq. ft.
proposed percent impervious = 54.3%
proposed percent greenspace = 45.7%

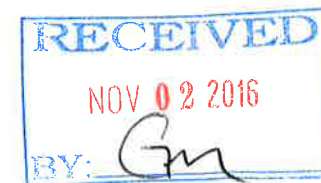
ARLINGTON LOOP

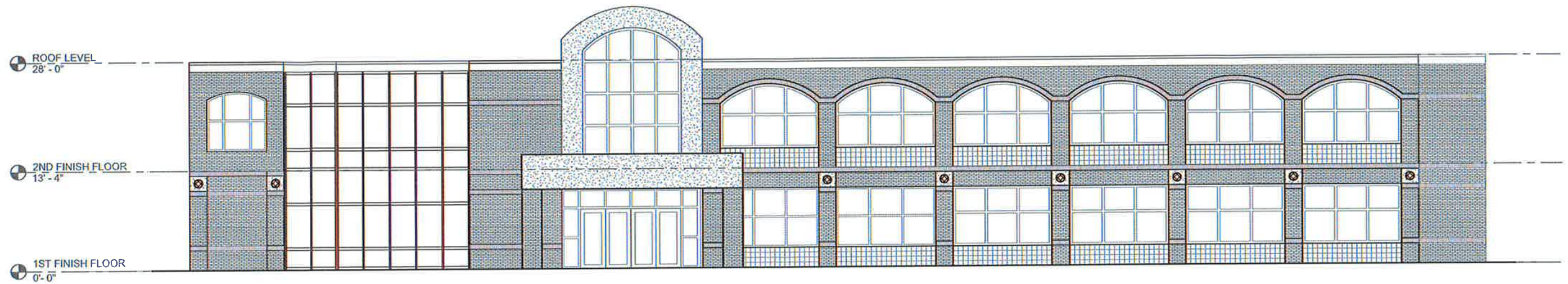


PERKINS & WILLIAMSON
ARCHITECTURE, PLLC
PHILLIP PERKINS, ARCHITECT
CHARLIE WILLIAMSON, ARCHITECT
4200 MAMIE STREET, SUITE 210
HATTIESBURG, MISSISSIPPI 39402
601-545-2464 OFFICE
601-545-2406 FAX

**CANCER CENTER 1ST FLOOR
RENOVATIONS AND ADDITIONS
FORREST GENERAL HOSPITAL**

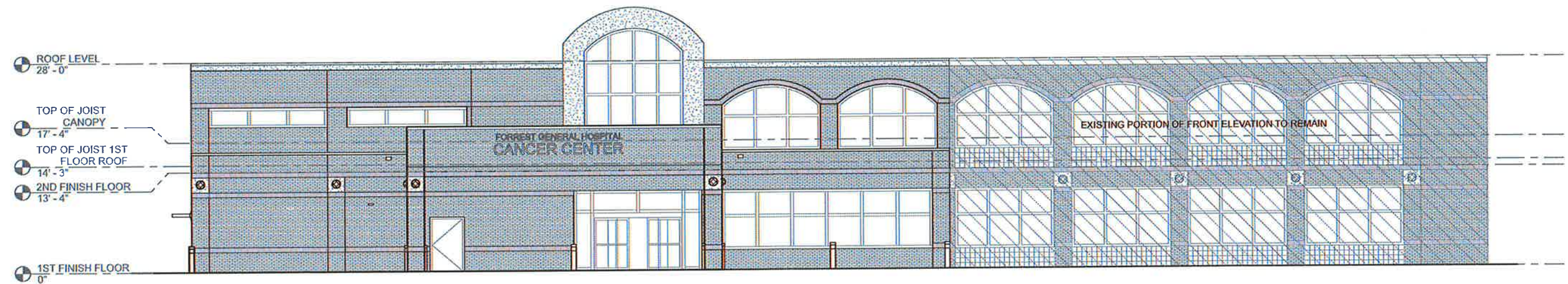
**MIDTOWN VARIANCE APPLICATION:
BTZ: BUILD-TO-ZONE**





EXISTING FRONT ELEVATION

SCALE: NOT TO SCALE

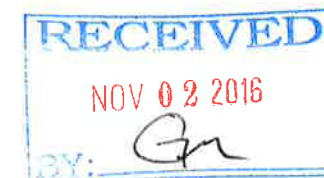


NEW WORK FRONT ELEVATION

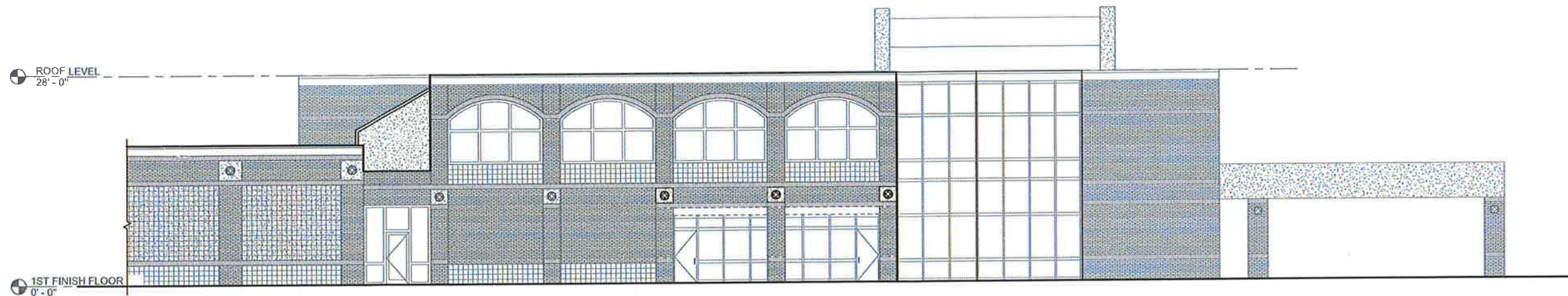
SCALE: NOT TO SCALE

PERKINS & WILLIAMSON
ARCHITECTURE, PLLC
PHILLIP PERKINS, ARCHITECT
CHARLIE WILLIAMSON, ARCHITECT
4200 MAMIE STREET, SUITE 210
HATTIESBURG, MISSISSIPPI 39402
601-545-2464 OFFICE
601-545-2406 FAX

**CANCER CENTER 1ST FLOOR
RENOVATIONS AND ADDITIONS
FORREST GENERAL HOSPITAL**

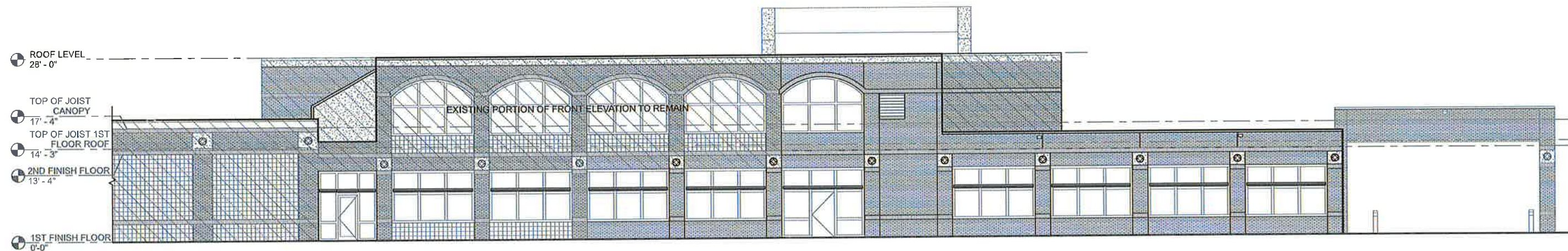


**MIDTOWN VARIANCE APPLICATION:
BTZ: BUILD-TO-ZONE**



EXISTING SOUTH ELEVATION

SCALE: NOT TO SCALE



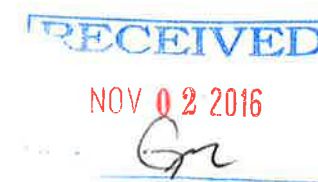
NEW WORK SOUTH ELEVATION

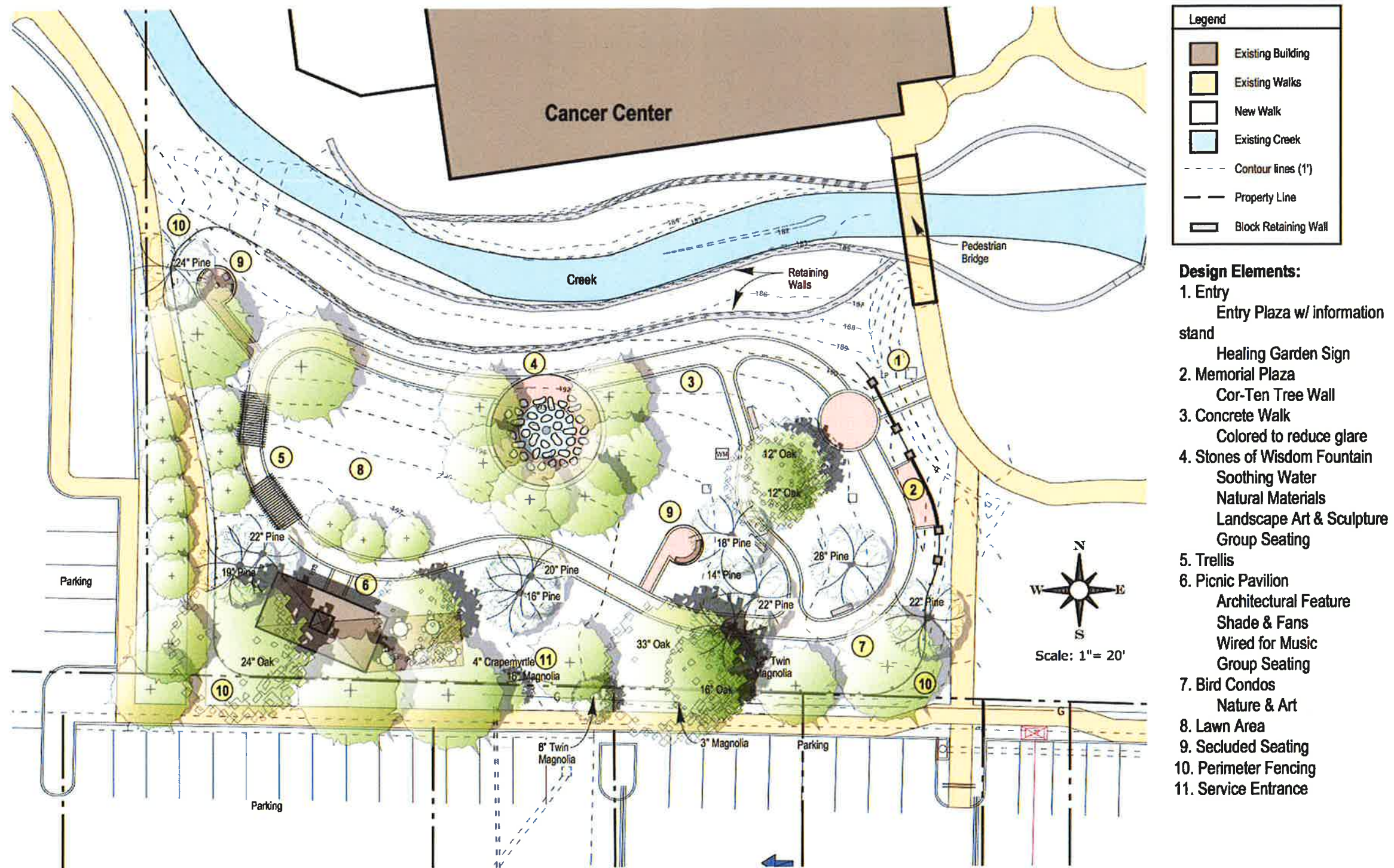
SCALE: NOT TO SCALE

PERKINS & WILLIAMSON
ARCHITECTURE, PLLC
PHILLIP PERKINS, ARCHITECT
CHARLIE WILLIAMSON, ARCHITECT
4200 MAMIE STREET, SUITE 210
HATTIESBURG, MISSISSIPPI 39402
601-545-2464 OFFICE
601-545-2406 FAX

**CANCER CENTER 1ST FLOOR
RENOVATIONS AND ADDITIONS
FORREST GENERAL HOSPITAL**

**MIDTOWN VARIANCE APPLICATION:
BTZ: BUILD-TO-ZONE**





PERKINS & WILLIAMSON
ARCHITECTURE, PLLC
PHILLIP PERKINS, ARCHITECT
CHARLIE WILLIAMSON, ARCHITECT
4200 MAMIE STREET, SUITE 210
HATTIESBURG, MISSISSIPPI 39402
601-545-2464 OFFICE
601-545-2406 FAX

**CANCER CENTER 1ST FLOOR
RENOVATIONS AND ADDITIONS
FORREST GENERAL HOSPITAL**

**MIDTOWN VARIANCE APPLICATION:
BTZ: BUILD-TO-ZONE**





City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-60

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: 6623 US Hwy 49 - Variance - Curb to Property Line

Title: APPROVE or DENY a petition filed by John Anglin, Engineer, David Chunn, Owner, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1). The Planning Commission recommended to APPROVE on November 2, 2016.

Type: Action Item

Drafter: Ginger Maddox

In Control: City Council

Reference:

Attachments: November PC Minutes (DRAFT), Image Sheet - 6623 Hwy 49 - Variance, Staff Summary - 6623 Hwy 49 - Variance, Applicant Sheet - 6623 Hwy 49, 6623 Hwy 49 - Prelim Site Plan

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
November 2, 2016**

The Hattiesburg Planning Commission did meet in a regular session on November 2, 2016 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Joseph White, Chairman, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Eric Martin
 Mark Miller
 Joseph White, Chairman

Commissioners Absent: Sandra Thompson
 Jessie Wilson

Also Present: Ginger Maddox, Planning Division Manager
 Melinda Green, Urban Development
 Armendia Esters, Planning Division

Chairman White declared the meeting of the Hattiesburg Planning Commission open and in session at 1:03 P.M.

INVOCATION

Commissioner White gave the invocation.

AGENDA REVIEW

There came the matter of the November 2016 Agenda. A request was made by Ginger Maddox, Planning Division Manager for a motion to remove Item E from the Agenda.

A request was made by Chairman White for a motion to approve the November 2016 Agenda with Item E removed from the Agenda. A motion was made to approve the November 2016 Agenda with Item E removed from the Agenda by Commissioner McMurtrey and seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Mark Miller
 Eric Martin

Commissioners voting nay: None

Commissioners abstaining: None

MINUTES REVIEW

There came the matter of the October 5, 2016 Minutes. A request was made by Chairman White for a motion to approve the October 5, 2016 minutes. A motion was made by Commissioner Corts to approve the minutes and seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Jessie Wilson

Commissioners voting nay: None

Commissioners abstaining: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report was provided to the commission of monthly and YTD Permit information for October, 2016.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox, Planning Division Manager. Ms. Maddox reported that there will be a Special Call session of the City Council to review the proposed Land Development Code. The Special Call will take place on November 28, 2016 at 4:00pm in Council Chambers. The Mayor and City Council have declared the month of October Planning Month for the city of Hattiesburg. The declaration aligns with the National recognition of October as Community Development and Planning Month. All other Planning Commission items, from October, were approved.

CHAIRMAN'S REPORT

There came the matter of the Chairman's Report. There was none.

PUBLIC HEARING

Chairman White declared the Public Hearing open at 1:18 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Variance), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 for a proposed Digital Billboard located on a certain property located at 4041 Old

Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	Leonard Busby, III	P.O. Box 6439	Laurel, MS
<u>Opponents:</u>	Norman Beasley	2055 Oak Grove Road	Hattiesburg, MS

Mr. Beasley stated that a new static billboard has been recently permitted for the Hwy 98/Old Hwy 11 intersection which would further prohibit Mr. Busby from meeting the required 1,250 radius required of all digital billboards. Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the petition. Commissioner Miller made a motion to deny the petition because special conditions and circumstances do not exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would not deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do result from the actions of the applicant; and that granting the variance requested will confer on the applicant special privileges that are denied by the code to other lands, structures, or buildings in the same district.

Commissioners voting aye: Dick Conville
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Eric Martin

Commissioners voting nay: Judy Corts

Commissioners abstaining: None

There came the matter of Item B (Use Permit Upon Review), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, remanded by the City Council on September 20, 2016, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a Use Permit Upon Review for a “Digital Billboard” as provided in Article 5, Section 95.10(3.1)(3) for certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Miller made a motion to deny the request because there is not public need for the proposed use, as opposed to the private interest of individual. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item C (Zoning Change), by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

	Name	Address	City/State
<u>Presented by:</u>	Dustin Gatlin	2203 Hardy Street	Hattiesburg, MS
	- Engineer, Walker Associates		
<u>Proponents:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
	- Forrest General Hospital		
<u>Opponents:</u>	Chad M. Sommers	125 Victoria Drive	Hattiesburg, MS
	Kendon Ellerman	108 Victoria Drive	Hattiesburg, MS

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because there is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property. The motion was seconded by Commissioner Corts.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item D (Variance), by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
<u>Proponents:</u>	Todd Jackson, ADP	One Convention Center Plaza	Hattiesburg, MS
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item F (Variance), by John Anglin, Engineer, David Chunn, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

	Name	Address	City/State
<u>Presented by:</u>	John Anglin Joe McMurry	6652 US Hwy 98 101 Hickory Circle	Hattiesburg, MS Petal, MS
<u>Proponents:</u>	None		

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item G (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item H (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item I (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.1 (F) which

states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

BUSINESS MEETING

There being no further business, Commissioner [REDACTED] made a motion to adjourn the meeting. The motion was seconded at Commissioner [REDACTED].

Joe White, Chairman

Pattie Brantley, AICP, Director of Urban Development.

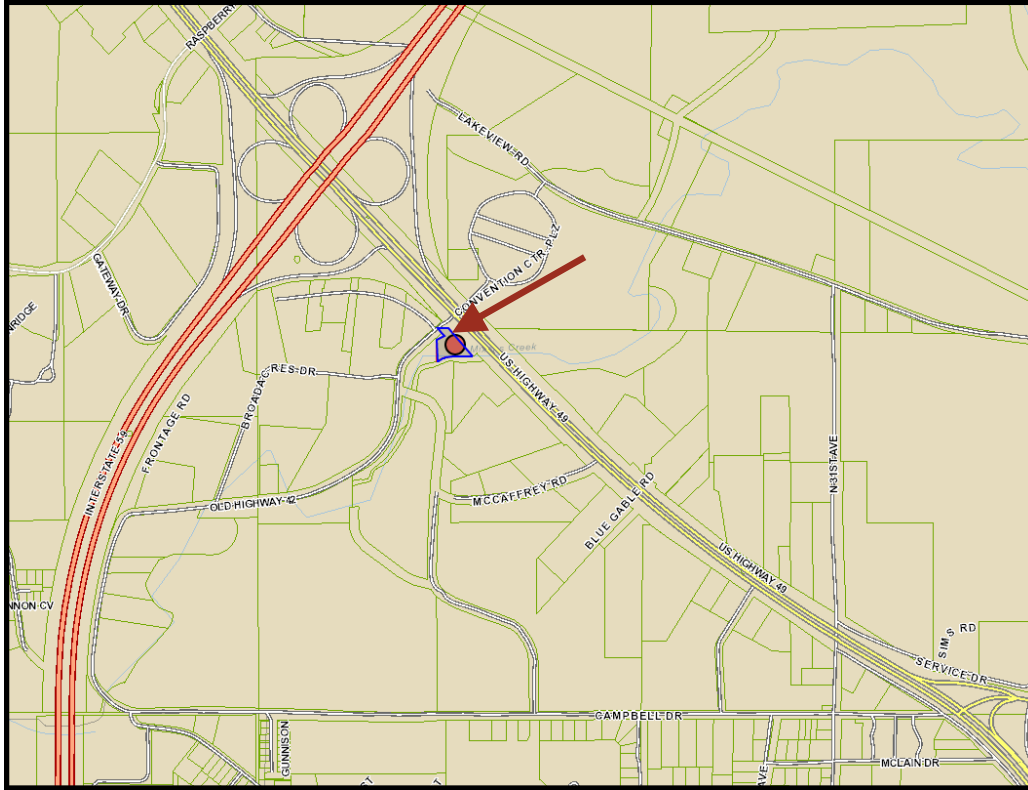
SUBJECT PARCEL: 6623 US Hwy 49

John Anglin, Engineer, David Chunn, Owner

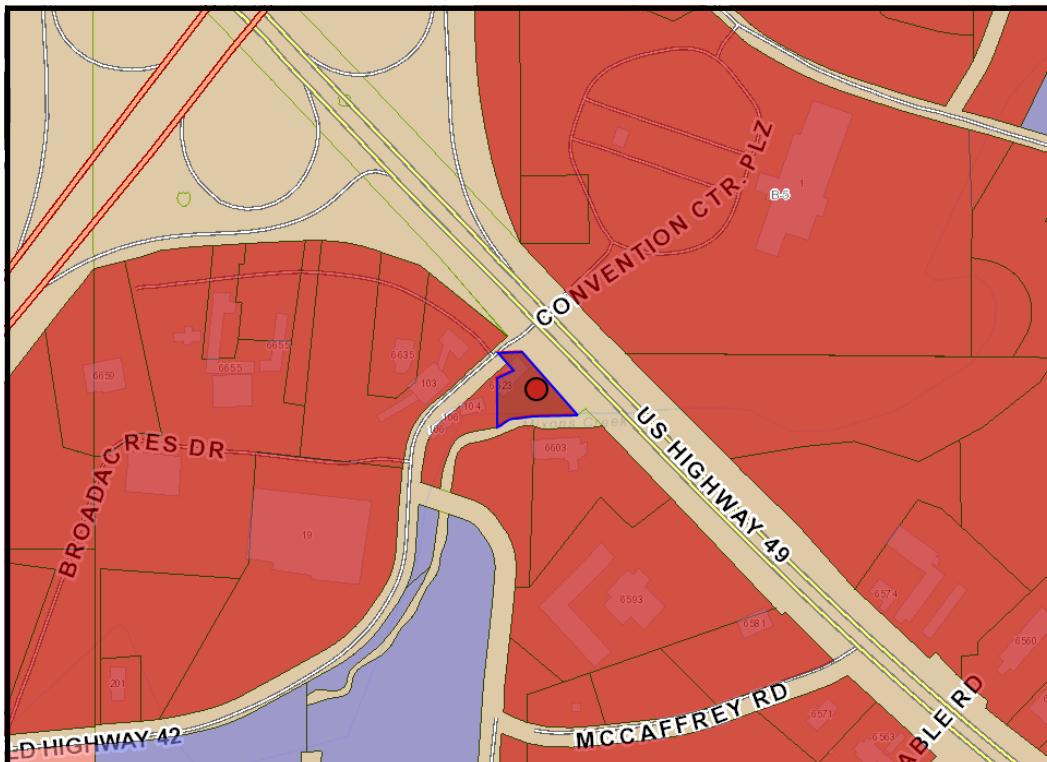
The applicant requests a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).



Vicinity Map—Ward 1



Zoning—B-5



Site Aerial



SURROUNDING AREA

Northern Direction: B-5 Regional
Business District / Commercial,
Lake Terrace Convention Center



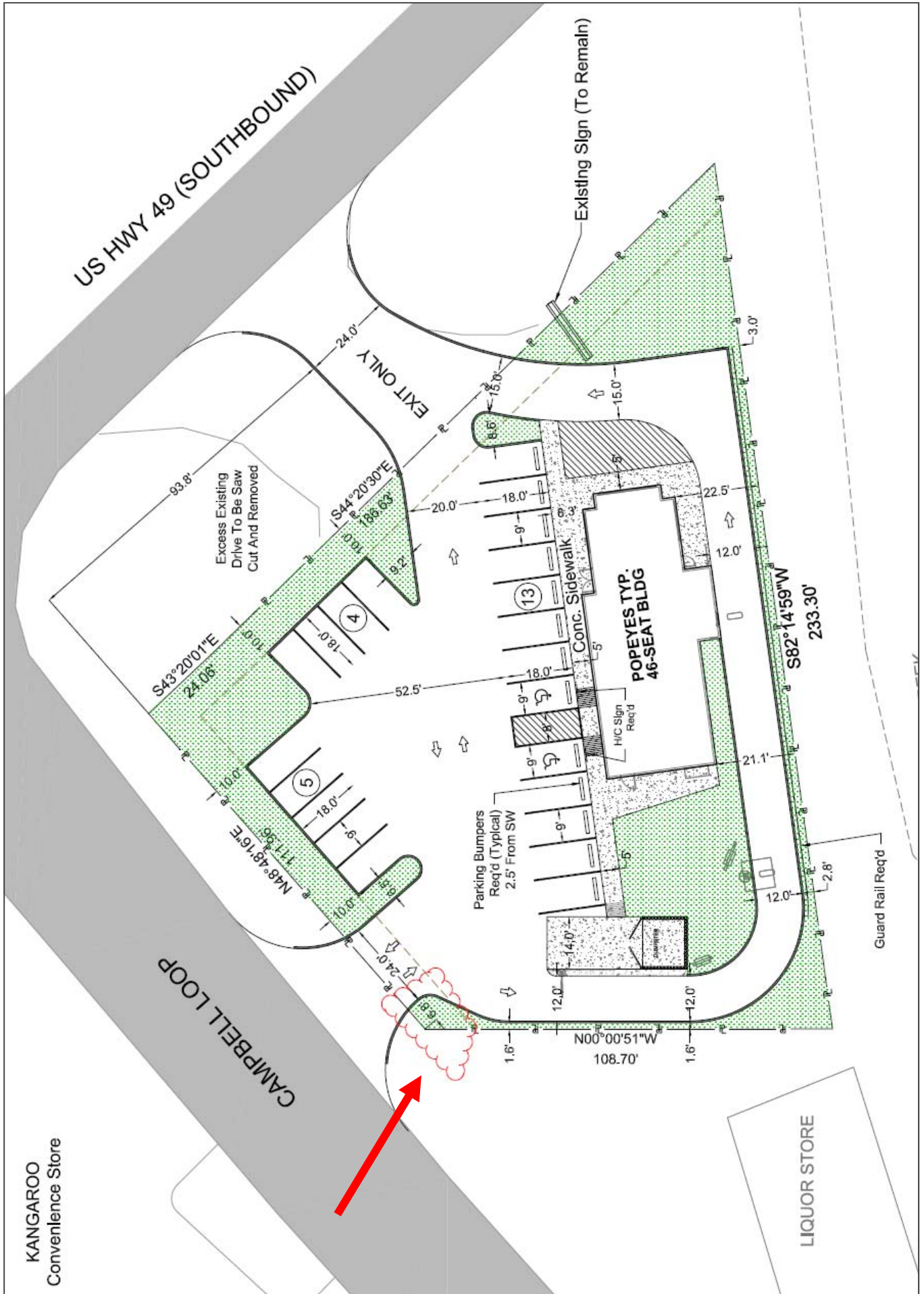
Southern Direction: B-5 Regional
Business District /Hotel



Eastern Direction: B-5 Regional
Business District / Lake Terrace
Convention Center

Western Direction: B-5 Regional
Business District / Commercial







**Planning Commission
Case Fact Sheet**

Property Representative: John Anglin, Engineer
Property Owner: David Chunn

Address of Properties:	Tax Parcels	PPIN:	Ward:
6623 US Hwy 49	2-024M-31-016.00	27492	1

Requests: **Variance**

Purpose of Request: To consider an application to request a **Variance** from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

Applicant Summary: See Attached

Applicable Regulations:

SECTION 89 **Parking Off-Street / On-Street Automobile and Vehicle Loading.**

89.08 Curb Cuts: Two (2) curb cuts per minimum lot area on each minimum street frontage, maximum width of a curb cut is twenty-five (25) feet, minimum distance between curb cuts on a single lot shall be forty (40) feet and shall be a minimum of twelve and one-half (12.5) feet from property lines in Business districts. The Site Plan Review Committee may authorize an increase in the width of a curb cut, to a maximum width of forth (40) feet, where warranted for the maneuvering of large vehicles.

Present Zoning: This parcel is currently zoned B-5 Regional Business District.

Present Use: Vacant gas station

Surrounding Zoning

and Land Use: North: B-5 Regional Business District / Lake Terrace Convention Center
South: B-5 Regional Business District /Hotel
East: B-5 Regional Business District /Lake Terrace Convention Center
West: B-5 Regional Business District / Commercial

Most Nearly Bounded By (streets): This parcel is accessible from the North by Campbell Loop and the East by US Hwy 49. It is bounded to the West by Campbell Loop and the South by McCaffery Road

Letters or Concerns stated: The Planning Division Office has not received any letters or other written communications relative to this case as of October 27, 2016.

History / Background: This development has started a review process by the Site Plan Review Committee.

The applicant received a letter of support from the neighboring property owner.

Variance Options: Recommend **approval** or **denial** of the request for a **variance** from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49.

Basis for Approval:

1. That special conditions and circumstances **(do / do not)** exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district;
2. That literal interpretation of the provisions of this Code **(would / would not)** deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code;
3. That the special conditions and circumstances **(do / do not)** result from the actions of the applicant;
4. That granting the variance requested **(will / will not)** confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

Variance Information (1 page)

Note: No nonconforming use of neighboring lands, structures, or buildings in the same district, and no permitted or nonconforming use of lands, structures, or buildings in other districts shall be considered grounds for the issuance of a variance.

1. List reasons why you feel that the property could not be reasonably used without the requested

variance: The driveway will not line up with the drive-thru
order line if the 12.5' driveway offset is used.

2. All of the following conditions must be met before a variance can be recommended.

Explain and justify your proposal's compliance with each condition:

- a. That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district.

The existing lot is a peculiar shaped parcel with only
112' of frontage along Campbell.

- b. That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code.

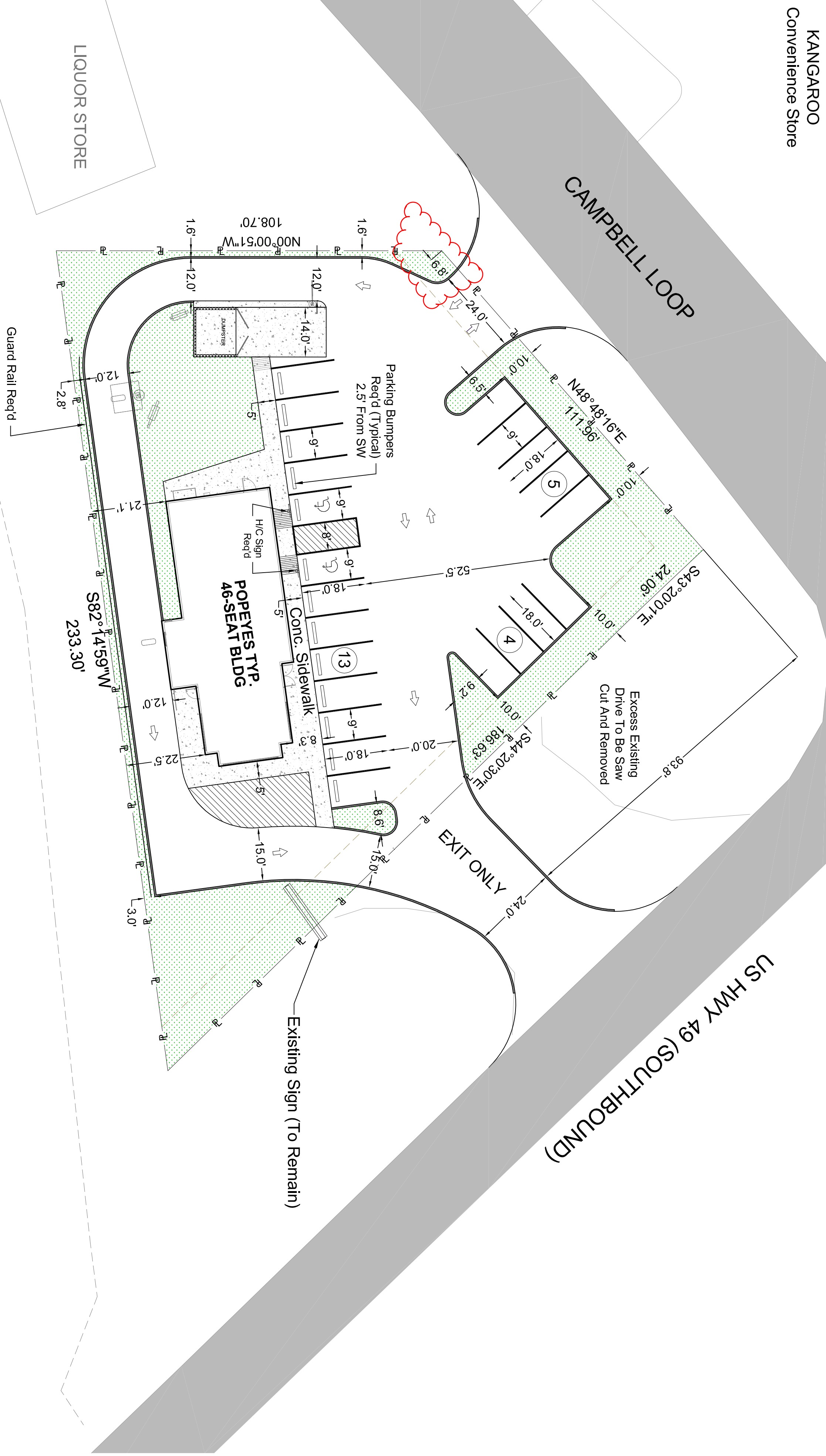
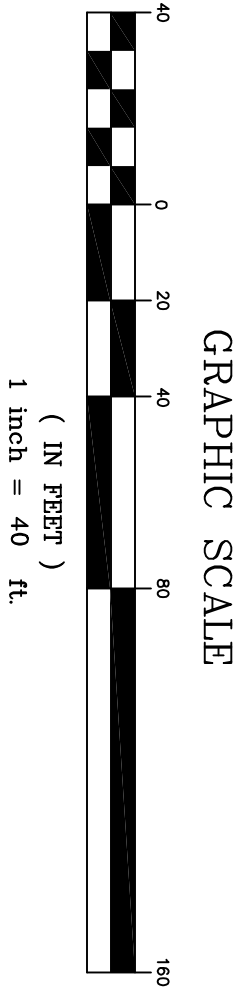
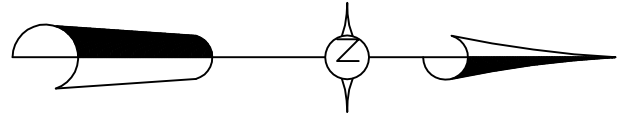
Subject property would not be usable for current application
under current code.

- c. That the special conditions and circumstances do not result from the actions of the applicant.

Special conditions do not result. Due to the size & shape
of the lot, the required driveway setbacks severely limit
the use of property.

- d. That granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

No special privileges will be granted to applicant.



- GENERAL NOTES**
- Prior to construction operations, the Contractor shall verify the location of existing utilities on the project site, and shall promptly repair those which are damaged by the construction operations.
 - Specifications for all materials and construction methods for road and/or street work shall conform to the applicable provisions of the Standard Specifications for State Aid Road and Bridge Construction, Division of State Aid Road Construction, Latest Edition, when referenced in the technical specifications.
 - Contractor shall provide all necessary fittings and appurtenances necessary for complete installation of all improvements, whether specifically indicated or not.
 - Any local, state, or federal permitting required for construction shall be the responsibility of the Contractor.
 - The Contractor shall be responsible for completing all sampling and testing of materials incorporated into the project. All phases of testing, including but not limited to sampling, transporting, and testing of materials, must be performed by a certified testing laboratory.
 - It is the responsibility of the Contractor to protect existing structures that are to remain such as pipes, inlets, and paved ditches, etc., from damage which might occur during construction.
 - To prevent damage to adjacent properties, Contractor shall properly establish the property boundaries of the subject property site prior to any construction activities within the subject property. The Contractor shall not enter upon or cause damage to adjacent properties without written permission from adjacent property owner(s).
 - The Contractor shall provide adequate traffic control (i.e., flagmen, barricades, etc.) when working with public road right-of-way. All traffic control shall be in full compliance with the latest version of the Manual on Uniform Traffic Control Devices (MUTCD).
 - No construction activities shall commence until all approvals and permits have been obtained from governing authorities (including but not limited to City, County, MS Department of Health, MS Department of Environmental Quality, Mississippi Department of Transportation (MDOT), Corps of Engineers, Utility Associations as required). Any work performed prior to obtaining said permits and approvals shall occur at the risk of the Contractor and/or Owner.

Contractor Shall Adjust Utility's
To Avoid Grading Conflicts.



VICINITY MAP
N.T.S.

SUBJECT PROPERTY IS ZONED B-S
PROPOSED BUILDING =2,157 SF WITH 46 SEATS
PARKING REQUIRED:
10 SPACES + 1 SPACE PER 4 SEATS
= 22 SPACES REQUIRED
PARKING SPACES PROVIDED:
22 SPACES



- UTILITY NOTES:**
- This location of utilities are approximate only. excavation must be done with caution. The Mississippi One-Call Network (1-800-222-8477) should be notified prior to commencing with excavation activities.
 - Additional underground utilities may exist. Locating excavation, however, the exact location of underground utilities cannot be accurately, completely, and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary.

CAD FILE: 90362189 Plans.dwg
CCE PROJ.: 90362189
SCALE: 1" = 40'
DATE: August, 2016
CHECKED: JCA
DRAWN BY: TL



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-61

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: 3000 Hardy Street along S. 30th Avenue - FBC Variance 3.15.2 (B)

Title: APPROVE or DENY a petition filed by Rob O. Tatum, Jr, Owner, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.

Type: Action Item

Drafter: Ginger Maddox

In Control: City Council

Reference:

Attachments: November PC Minutes (DRAFT), Image Sheet- Midtown - 3000 Hardy, Staff Summary - Midtown- 3000 Hardy Street, Applicant Sheet - G - 3000 Hardy St, 3000 Hardy St - Conceptual Design_Variances, 3000 Hardy St - Revised Variance Calc

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
November 2, 2016**

The Hattiesburg Planning Commission did meet in a regular session on November 2, 2016 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Joseph White, Chairman, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Eric Martin
 Mark Miller
 Joseph White, Chairman

Commissioners Absent: Sandra Thompson
 Jessie Wilson

Also Present: Ginger Maddox, Planning Division Manager
 Melinda Green, Urban Development
 Armendia Esters, Planning Division

Chairman White declared the meeting of the Hattiesburg Planning Commission open and in session at 1:03 P.M.

INVOCATION

Commissioner White gave the invocation.

AGENDA REVIEW

There came the matter of the November 2016 Agenda. A request was made by Ginger Maddox, Planning Division Manager for a motion to remove Item E from the Agenda.

A request was made by Chairman White for a motion to approve the November 2016 Agenda with Item E removed from the Agenda. A motion was made to approve the November 2016 Agenda with Item E removed from the Agenda by Commissioner McMurtrey and seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Mark Miller
 Eric Martin

Commissioners voting nay: None

Commissioners abstaining: None

MINUTES REVIEW

There came the matter of the October 5, 2016 Minutes. A request was made by Chairman White for a motion to approve the October 5, 2016 minutes. A motion was made by Commissioner Corts to approve the minutes and seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Jessie Wilson

Commissioners voting nay: None

Commissioners abstaining: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report was provided to the commission of monthly and YTD Permit information for October, 2016.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox, Planning Division Manager. Ms. Maddox reported that there will be a Special Call session of the City Council to review the proposed Land Development Code. The Special Call will take place on November 28, 2016 at 4:00pm in Council Chambers. The Mayor and City Council have declared the month of October Planning Month for the city of Hattiesburg. The declaration aligns with the National recognition of October as Community Development and Planning Month. All other Planning Commission items, from October, were approved.

CHAIRMAN'S REPORT

There came the matter of the Chairman's Report. There was none.

PUBLIC HEARING

Chairman White declared the Public Hearing open at 1:18 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Variance), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 for a proposed Digital Billboard located on a certain property located at 4041 Old

Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	Leonard Busby, III	P.O. Box 6439	Laurel, MS
<u>Opponents:</u>	Norman Beasley	2055 Oak Grove Road	Hattiesburg, MS

Mr. Beasley stated that a new static billboard has been recently permitted for the Hwy 98/Old Hwy 11 intersection which would further prohibit Mr. Busby from meeting the required 1,250 radius required of all digital billboards. Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the petition. Commissioner Miller made a motion to deny the petition because special conditions and circumstances do not exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would not deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do result from the actions of the applicant; and that granting the variance requested will confer on the applicant special privileges that are denied by the code to other lands, structures, or buildings in the same district.

Commissioners voting aye: Dick Conville
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Eric Martin

Commissioners voting nay: Judy Corts

Commissioners abstaining: None

There came the matter of Item B (Use Permit Upon Review), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, remanded by the City Council on September 20, 2016, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a Use Permit Upon Review for a “Digital Billboard” as provided in Article 5, Section 95.10(3.1)(3) for certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Miller made a motion to deny the request because there is not public need for the proposed use, as opposed to the private interest of individual. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item C (Zoning Change), by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

	Name	Address	City/State
<u>Presented by:</u>	Dustin Gatlin	2203 Hardy Street	Hattiesburg, MS
	- Engineer, Walker Associates		
<u>Proponents:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
	- Forrest General Hospital		
<u>Opponents:</u>	Chad M. Sommers	125 Victoria Drive	Hattiesburg, MS
	Kendon Ellerman	108 Victoria Drive	Hattiesburg, MS

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because there is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property. The motion was seconded by Commissioner Corts.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item D (Variance), by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
<u>Proponents:</u>	Todd Jackson, ADP	One Convention Center Plaza	Hattiesburg, MS
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item F (Variance), by John Anglin, Engineer, David Chunn, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

	Name	Address	City/State
<u>Presented by:</u>	John Anglin Joe McMurry	6652 US Hwy 98 101 Hickory Circle	Hattiesburg, MS Petal, MS
<u>Proponents:</u>	None		

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item G (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item H (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item I (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.1 (F) which

states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

BUSINESS MEETING

There being no further business, Commissioner [REDACTED] made a motion to adjourn the meeting. The motion was seconded at Commissioner [REDACTED].

Joe White, Chairman

Pattie Brantley, AICP, Director of Urban Development.

SUBJECT PARCEL:

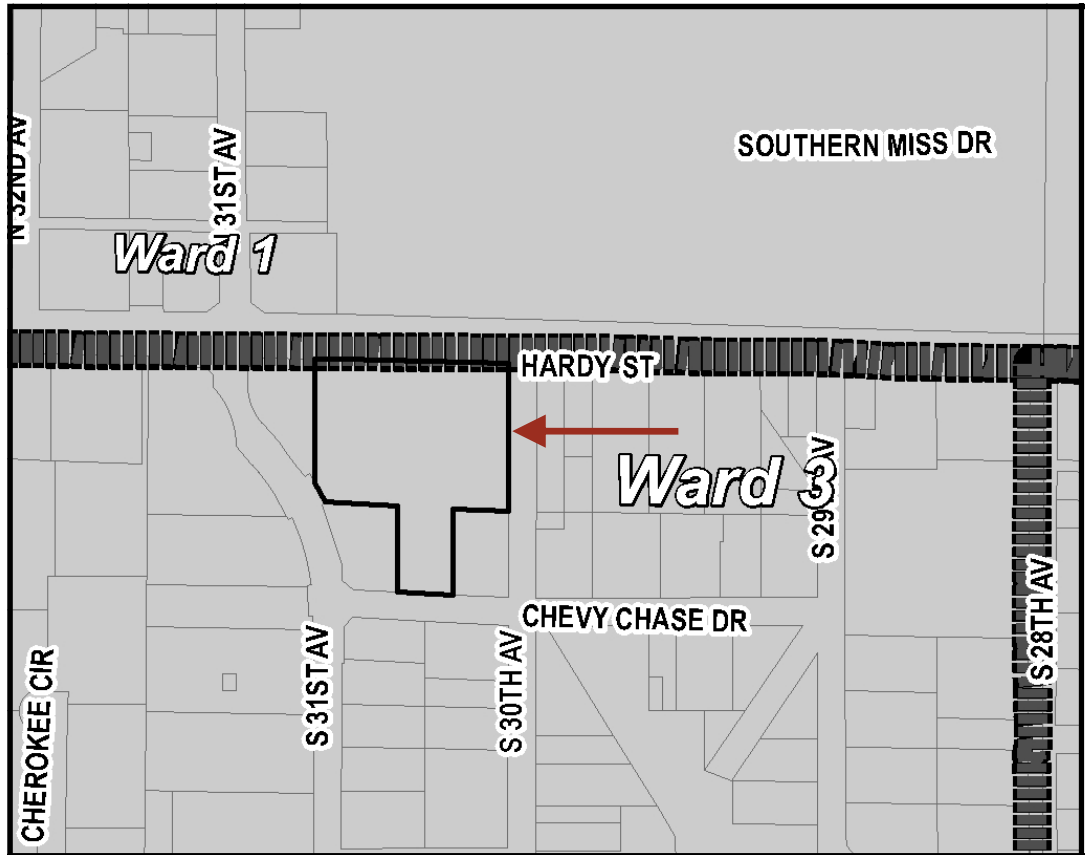
3000 Hardy Street

Robert O. Tatum, Jr.

The applicant requests a variance from Midtown Form-Based Code Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue; a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street; and a variance from Article 3, Section 3.15.1 (F) which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).



Vicinity Map—Ward 3



Zoning—MX-5 & MX-4



Site Aerial



SURROUNDING AREA

Northern Direction: R-3 (Multi-Family Residential) District / University of Southern Mississippi



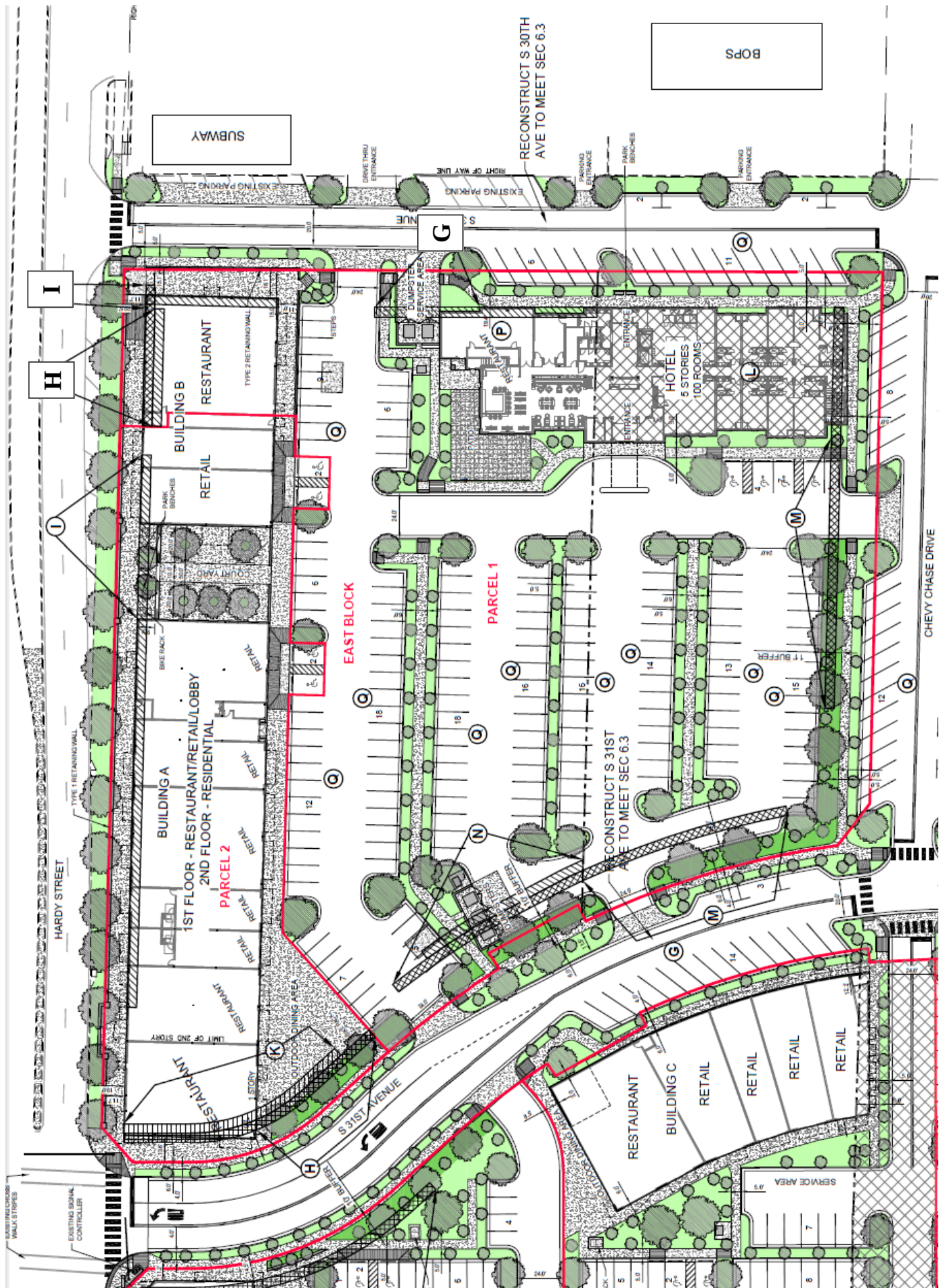
Southern Direction: MX-3(Mixed Use)
3 story / Vacant



Eastern Direction: MX-5 (Mixed Use)
5-story & HS (Hardy Street Overlay)/
Vacant



Western Direction: MX-3(Mixed Use)
3 story and EM-2 (Employment) 2
story / Parking Lot





**Planning Commission
Case Fact Sheet**

Property Owner: Robert O. Tatum, Jr

Address of Property:	Tax Parcels/Ward:	PPIN:	Ward:
3000 Hardy Street	028N-07-078.00	20837	3

Requests: **4 Variances from the Midtown Form-Based Code**

Purpose of Request: To consider an application to request a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue; a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street; and a **variance from Article 3, Section 3.15.1 (F)** which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

Applicant Summary: See Attached

Applicable Regulations:

SECTION 3.15 **Special Rules for the –HS Overlay District**

1. Lot, Placement

Build-to Zone (BTZ) - (F) Requires Building in primary street BTZ (min % of lot width)-90%.

2. Height

Building Height- (B) Street facing façade at min height (min% of lot width) - 75%.

Present Zoning: This parcel is zoned MX-5 (Mixed Use) 5-Story with the Hardy Street overlay District and MX-4 (Mixed Use) 4-Story.

Present Use: Undeveloped

Surrounding Zoning and Land Use:

North: R-3 (Multi-Family Residential) District / University of Southern Mississippi
South: MX-3(Mixed Use) 3-story / Undeveloped
East: MX-4 (Mixed Use) 4-story, MX-5 (Mixed Use) 5-story, & HS (Hardy Street Overlay)/ Commercial
West: MX-3(Mixed Use) 3-story and EM-2 (Employment) 2 story / Undeveloped

Most Nearly Bounded By (streets): This parcel is accessible from the North by Hardy Street, from the West by S.31st Street, and from the East by S.30th Street, and is bounded to the South by Chevy Chase Drive.

Letters or Concerns stated: The Planning Division Office has not received any letters or other written communications relative to this case, as of October 27, 2016

History / Background: The Variances presented in this report meet the same intent as petitions presented on the April 6, 2016, Planning Commission Agenda for this development. The applicant has changed the subdividing of the lot so that the Variance percentages previously approved are no longer sufficient. Petition "J" from the April HPC agenda is no longer needed. Petition "O" from the April agenda will be modified by item "G" in this November agenda. Petitions "H" & "I" are required due to the presence of a newly created parcel. The overall footprint has not been significantly altered since the presentation in the April 6, 2016 report.

Variance Option for Item G: Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3)

Variance Option for Item H: Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.2 (B)** which states

a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

Variance Option for Item I:

Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.1 (F)** which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3)

Basis for Approval:

1. That special conditions and circumstances **(do / do not)** exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district;
2. That literal interpretation of the provisions of this Code **(would / would not)** deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code;
3. That the special conditions and circumstances **(do / do not)** result from the actions of the applicant;
4. That granting the variance requested **(will / will not)** confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.



Variance Information (1 page)

Note: No nonconforming use of neighboring lands, structures, or buildings in the same district, and no permitted or nonconforming use of lands, structures, or buildings in other districts shall be considered grounds for the issuance of a variance.

1. List reasons why you feel that the property could not be reasonably used without the requested

variance:

Market/tenant demands for parking versus code requirements. We are not able to develop this land without the level of parking we are requesting. The code encourages shared parking, however the shared parking with other sites is not in place at this time since we are the initial developer of land in this area. Also, there is also no existing on-street parking infrastructure for us to share your parking with. In addition, the odd shapes of the parcels we are attempting to develop make it impossible to meet all of the zoning requirements, because it would further reduce parking.

2. All of the following conditions must be met before a variance can be recommended.

Explain and justify your proposal's compliance with each condition:

- a. That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district.

We are the initial developer and the Form Based code encourages shared parking - which is not available for my site.

This causes the hardship for multiple variances.

- b. That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code.

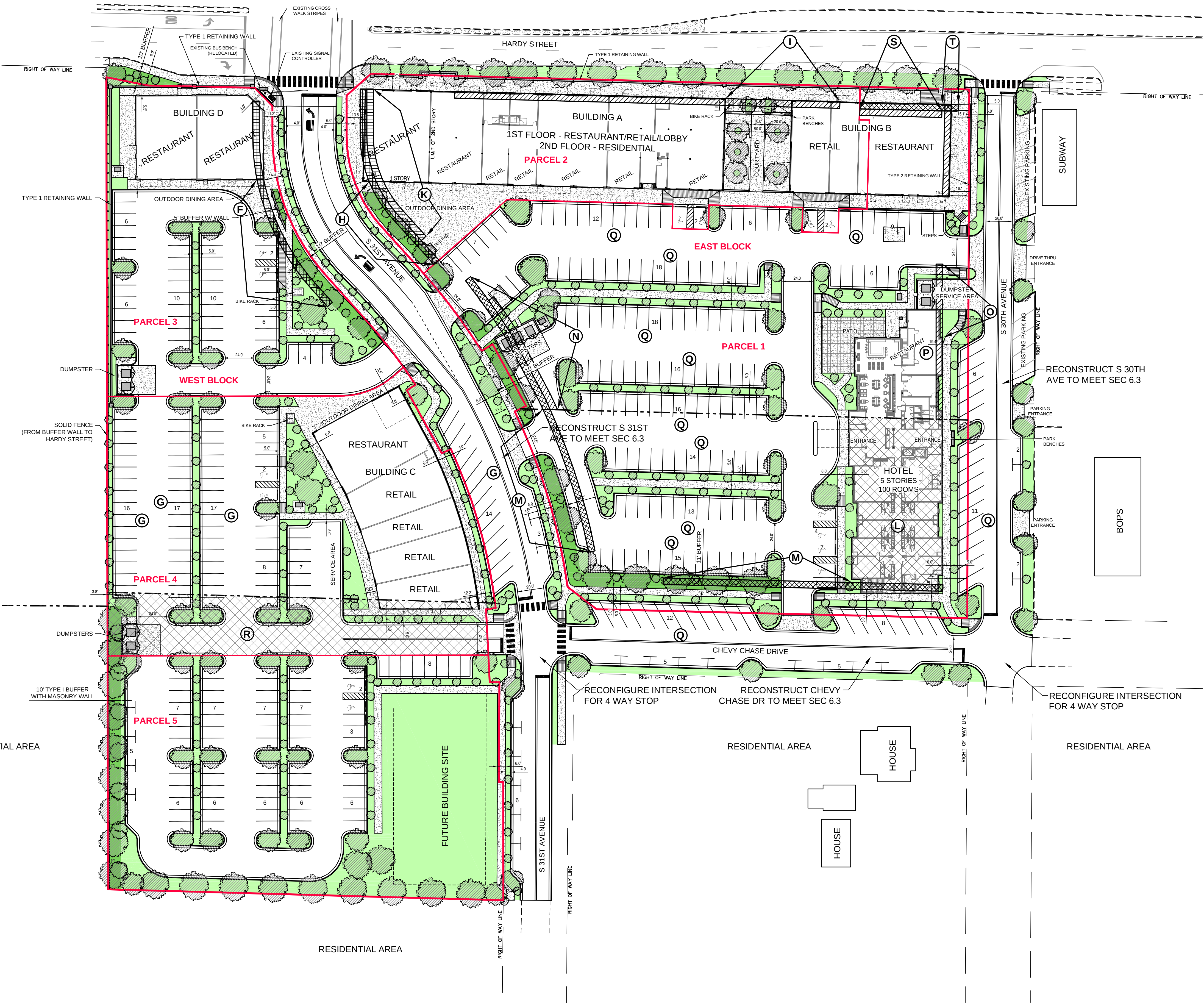
If we had no variances given to us we would be unable to do the project. There is not enough parking in the area to substantiate all the development required by code.

- c. That the special conditions and circumstances do not result from the actions of the applicant.

These are a result of the Form Based code. We are the first development and are unable to meet all of the requirements, mainly due to the lack of availability of parking. Secondly, our site is irregular and if we meet all of the zoning requirements we would lose even more parking.

- d. That granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

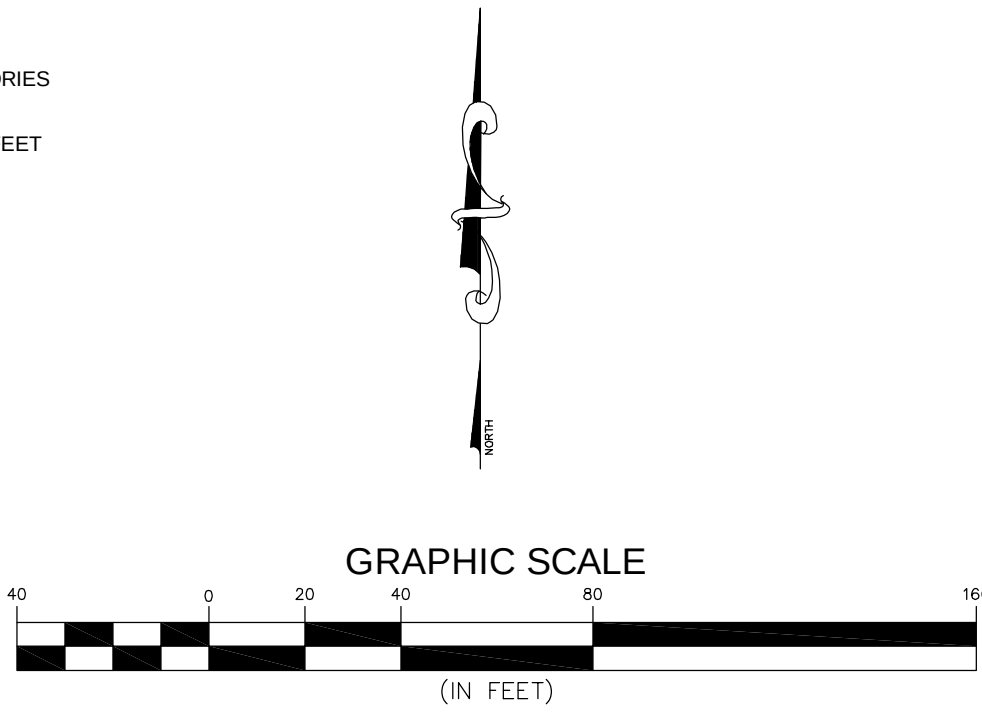
We are the first ones doing a major development that are required to meet this code. There is not the available amenities contemplated in the code and thus we can't do a development without these variances.



Internal Parking Islands by Block			
Block	Islands Required	Islands Provided	
West Block	7	4	
East Block	14	3	
Total	21	7	

Post Design Street Frontage Coverage Calculation					
Parcel - Zone - Street	Property Length	Units	Building Length	Units	Coverage Required / Coverage Provided
West Block - Parcel 1 - MX-3	Hardy Street	127.8 Ft	97.4 Ft	70%	76%
	S 31st Avenue	240.0 Ft	64.5 Ft	70%	27%
West Block - Parcel 2 - MX-3	S 31st Avenue	227.6 Ft	181.3 Ft	70%	80%
West Block - Parcel 3 - EM-2	S 31st Avenue (Future Development)	186.2 Ft	0.0 Ft	70%	0%
East Block - Parcel 1 - MX-4	S 31st Avenue	162.7 Ft	0.0 Ft	70%	0%
	Chevy Chase Drive	303.1 Ft	69.1 Ft	70%	23%
	S 30th Avenue	150.3 Ft	132.3 Ft	35%	88%
East Block - Parcel 1 - 1st Floor MX-5-HS	S 31st Avenue	126.9 Ft	0.0 Ft	90%	0%
	Hardy Street	82.8 Ft	69.7 Ft	90%	84%
	S 30th Avenue	250.5 Ft	153.6 Ft	45%	61%
East Block - Parcel 1 - 2nd Floor MX-5-HS	S 31st Avenue	126.9 Ft	0.0 Ft	75%	0%
	Hardy Street	82.8 Ft	0.0 Ft	75%	0%
	S 30th Avenue	250.5 Ft	83.6 Ft	75%	33%
East Block - Parcel 2 - 1st Floor MX-5-HS	S 31st Avenue	170.4 Ft	70.0 Ft	90%	41%
	Hardy Street	389.5 Ft	375.0 Ft	90%	96%
East Block - Parcel 2 - 2nd Floor MX-5-HS	S 31st Avenue	170.4 Ft	0.0 Ft	75%	0%
	Hardy Street	389.5 Ft	205.5 Ft	75%	53%

- MAXIMUM BUILDING HEIGHT ALLOWED: 4 STORIES
DESIGNED BUILDING HEIGHT: 5 STORIES
- MAXIMUM BUILDING SETBACK ALLOWED: 15 FEET
DESIGNED BUILDING SETBACK: 19.4 FEET
- EXISTING ZONE: EM-2
PREFERRED ZONE: MX-3



12	06/26/16	UPDATED VARIANCES	RES
11	09/22/16	REVISED PARCEL LINES PER COMMENTS	RES
10	09/12/16	REVISED PARCEL LINES PER COMMENTS	RES
9	09/09/16	ADDED PARCEL LINES	RES
8	09/06/16	REVISED SITE PLAN	RES
7	06/28/16	REVISED SITE PLAN	RES
NO.	DATE	DESCRIPTION	BY

CONCEPTUAL SITE PLAN

THE DISTRICT AT MIDTOWN
MIDTOWN DEVELOPERS, LLC
HATTIESBURG, MISSISSIPPI

301 Second Ave. | Hattiesburg, MS 39401 | (p) 601.544.1821 | (f) 601.544.0501 | sdw.com

Drawn by: RES

Checked by: SEM

Date: 02-29-2016

Scale: AS NOTED

Drawing No.: 15861

Sheet No. 1 of 1

Post Design Street Frontage Coverage Calculation

Parcel - Zone - Street	Property Length	Units	Building Length	Units	Coverage Required	Coverage Provided
West Block - Parcel 1 - MX-3						
Hardy Street	127.8	Ft	97.4	Ft	70%	76%
S 31st Avenue	240.0	Ft	64.5	Ft	70%	27%
West Block - Parcel 2 - MX-3						
S 31st Avenue	227.6	Ft	181.3	Ft	70%	80%
West Block - Parcel 3 - EM-2						
S 31st Avenue (Future Development)	186.2	Ft	0.0	Ft	70%	0%
East Block - Parcel 1 - MX-4						
S 31st Avenue	162.7	Ft	0.0	Ft	70%	0%
Chevy Chase Drive	303.1	Ft	69.1	Ft	70%	23%
S 30th Avenue	150.3	Ft	132.3	Ft	35%	88%
East Block - Parcel 1 - 1st Floor MX-5-HS						
S 31st Avenue	126.9	Ft	0.0	Ft	90%	0%
Hardy Street	82.8	Ft	69.7	Ft	90%	84%
S 30th Avenue	250.5	Ft	153.6	Ft	45%	61%
East Block - Parcel 1 - 2nd Floor MX-5-HS						
S 31st Avenue	126.9	Ft	0.0	Ft	75%	0%
Hardy Street	82.8	Ft	0.0	Ft	75%	0%
S 30th Avenue	250.5	Ft	83.6	Ft	75%	33%
East Block - Parcel 2 - 1st Floor MX-5-HS						
S 31st Avenue	170.4	Ft	70.0	Ft	90%	41%
Hardy Street	389.5	Ft	375.0	Ft	90%	96%
East Block - Parcel 2 - 2nd Floor MX-5-HS						
S 31st Avenue	170.4	Ft	0.0	Ft	75%	0%
Hardy Street	389.5	Ft	205.5	Ft	75%	53%

Variance Needed	Variance Approved	Net Change
0%	3%	3%
43%	53%	10%
0%	0%	0%
70%	70%	70%
70%	70%	0%
47%	47%	0%
0%	0%	0%
90%	90%	0%
6%	0%	-6% *
0%	0%	0%
75%	75%	0%
75%	0%	-75% *
42%	27%	-15% **
49%	63%	14%
0%	0%	0%
75%	75%	0%
22%	22%	0%

* New Variance Required

** Change to Existing Variance Required



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-62

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: APPROVE or DENY a petition filed by Rob O. Tatum,

Title: APPROVE or DENY a petition filed by Rob O. Tatum, Jr, Owner, to request a variance from Article 3, Section 3.15.2 (B) which states a street-facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.

Type: Action Item

Drafter: Ginger Maddox

In Control: City Council

Reference:

Attachments: November PC Minutes (DRAFT), Image Sheet-Midtown- 3000 Hardy St, Staff Summary - Midtown- 3000 Hardy Street, Applicant Sheet - H - 3000 Hardy St, 3000 Hardy St - Conceptual Design_Variances, 3000 Hardy St - Revised Variance Calc

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
November 2, 2016**

The Hattiesburg Planning Commission did meet in a regular session on November 2, 2016 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Joseph White, Chairman, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Eric Martin
 Mark Miller
 Joseph White, Chairman

Commissioners Absent: Sandra Thompson
 Jessie Wilson

Also Present: Ginger Maddox, Planning Division Manager
 Melinda Green, Urban Development
 Armendia Esters, Planning Division

Chairman White declared the meeting of the Hattiesburg Planning Commission open and in session at 1:03 P.M.

INVOCATION

Commissioner White gave the invocation.

AGENDA REVIEW

There came the matter of the November 2016 Agenda. A request was made by Ginger Maddox, Planning Division Manager for a motion to remove Item E from the Agenda.

A request was made by Chairman White for a motion to approve the November 2016 Agenda with Item E removed from the Agenda. A motion was made to approve the November 2016 Agenda with Item E removed from the Agenda by Commissioner McMurtrey and seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Mark Miller
 Eric Martin

Commissioners voting nay: None

Commissioners abstaining: None

MINUTES REVIEW

There came the matter of the October 5, 2016 Minutes. A request was made by Chairman White for a motion to approve the October 5, 2016 minutes. A motion was made by Commissioner Corts to approve the minutes and seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Jessie Wilson

Commissioners voting nay: None

Commissioners abstaining: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report was provided to the commission of monthly and YTD Permit information for October, 2016.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox, Planning Division Manager. Ms. Maddox reported that there will be a Special Call session of the City Council to review the proposed Land Development Code. The Special Call will take place on November 28, 2016 at 4:00pm in Council Chambers. The Mayor and City Council have declared the month of October Planning Month for the city of Hattiesburg. The declaration aligns with the National recognition of October as Community Development and Planning Month. All other Planning Commission items, from October, were approved.

CHAIRMAN'S REPORT

There came the matter of the Chairman's Report. There was none.

PUBLIC HEARING

Chairman White declared the Public Hearing open at 1:18 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Variance), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 for a proposed Digital Billboard located on a certain property located at 4041 Old

Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	Leonard Busby, III	P.O. Box 6439	Laurel, MS
<u>Opponents:</u>	Norman Beasley	2055 Oak Grove Road	Hattiesburg, MS

Mr. Beasley stated that a new static billboard has been recently permitted for the Hwy 98/Old Hwy 11 intersection which would further prohibit Mr. Busby from meeting the required 1,250 radius required of all digital billboards. Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the petition. Commissioner Miller made a motion to deny the petition because special conditions and circumstances do not exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would not deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do result from the actions of the applicant; and that granting the variance requested will confer on the applicant special privileges that are denied by the code to other lands, structures, or buildings in the same district.

Commissioners voting aye: Dick Conville
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Eric Martin

Commissioners voting nay: Judy Corts

Commissioners abstaining: None

There came the matter of Item B (Use Permit Upon Review), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, remanded by the City Council on September 20, 2016, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a Use Permit Upon Review for a “Digital Billboard” as provided in Article 5, Section 95.10(3.1)(3) for certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Miller made a motion to deny the request because there is not public need for the proposed use, as opposed to the private interest of individual. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item C (Zoning Change), by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

	Name	Address	City/State
<u>Presented by:</u>	Dustin Gatlin	2203 Hardy Street	Hattiesburg, MS
	- Engineer, Walker Associates		
<u>Proponents:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
	- Forrest General Hospital		
<u>Opponents:</u>	Chad M. Sommers	125 Victoria Drive	Hattiesburg, MS
	Kendon Ellerman	108 Victoria Drive	Hattiesburg, MS

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because there is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property. The motion was seconded by Commissioner Corts.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item D (Variance), by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
<u>Proponents:</u>	Todd Jackson, ADP	One Convention Center Plaza	Hattiesburg, MS
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item F (Variance), by John Anglin, Engineer, David Chunn, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

	Name	Address	City/State
<u>Presented by:</u>	John Anglin Joe McMurry	6652 US Hwy 98 101 Hickory Circle	Hattiesburg, MS Petal, MS
<u>Proponents:</u>	None		

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item G (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item H (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item I (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.1 (F) which

states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

BUSINESS MEETING

There being no further business, Commissioner [REDACTED] made a motion to adjourn the meeting. The motion was seconded at Commissioner [REDACTED].

Joe White, Chairman

Pattie Brantley, AICP, Director of Urban Development.

SUBJECT PARCEL:

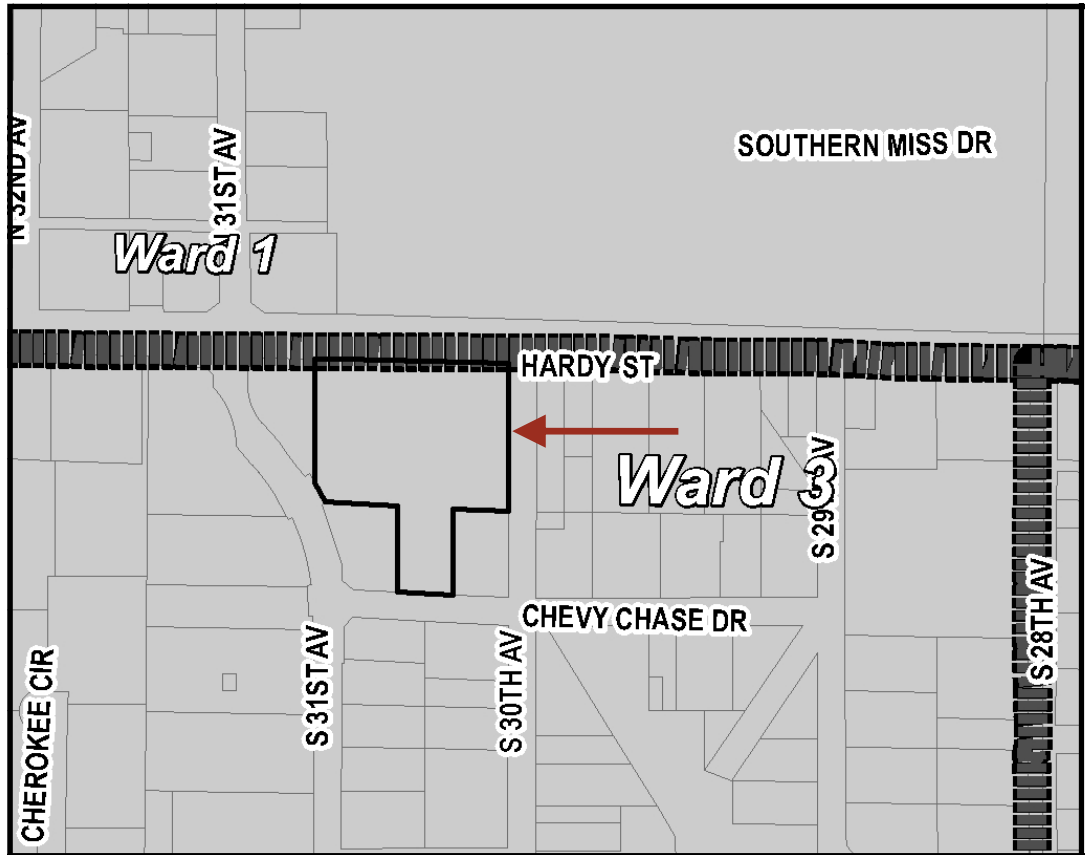
3000 Hardy Street

Robert O. Tatum, Jr.

The applicant requests a variance from Midtown Form-Based Code Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue; a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street; and a variance from Article 3, Section 3.15.1 (F) which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).



Vicinity Map—Ward 3



Zoning—MX-5 & MX-4



Site Aerial



SURROUNDING AREA

Northern Direction: R-3 (Multi-Family Residential) District / University of Southern Mississippi



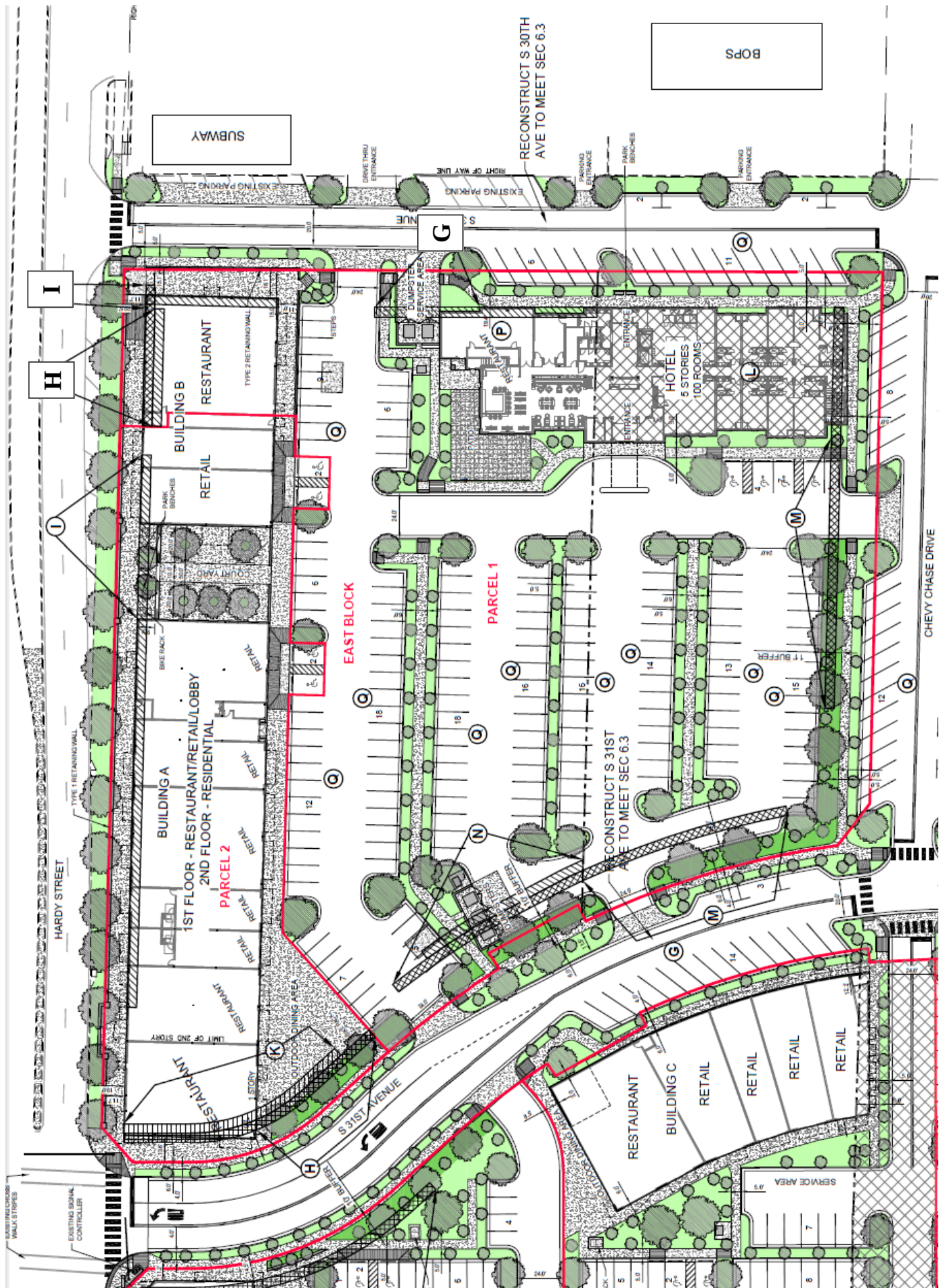
Southern Direction: MX-3(Mixed Use)
3 story / Vacant



Eastern Direction: MX-5 (Mixed Use)
5-story & HS (Hardy Street Overlay)/
Vacant



Western Direction: MX-3(Mixed Use)
3 story and EM-2 (Employment) 2
story / Parking Lot





**Planning Commission
Case Fact Sheet**

Property Owner: Robert O. Tatum, Jr

Address of Property:	Tax Parcels/Ward:	PPIN:	Ward:
3000 Hardy Street	028N-07-078.00	20837	3

Requests: **4 Variances from the Midtown Form-Based Code**

Purpose of Request: To consider an application to request a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue; a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street; and a **variance from Article 3, Section 3.15.1 (F)** which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

Applicant Summary: See Attached

Applicable Regulations:

SECTION 3.15 Special Rules for the –HS Overlay District

1. Lot, Placement

Build-to Zone (BTZ) - (F) Requires Building in primary street BTZ (min % of lot width)-90%.

2. Height

Building Height- (B) Street facing façade at min height (min% of lot width) - 75%.

Present Zoning: This parcel is zoned MX-5 (Mixed Use) 5-Story with the Hardy Street overlay District and MX-4 (Mixed Use) 4-Story.

Present Use: Undeveloped

Surrounding Zoning and Land Use:

North: R-3 (Multi-Family Residential) District / University of Southern Mississippi
South: MX-3(Mixed Use) 3-story / Undeveloped
East: MX-4 (Mixed Use) 4-story, MX-5 (Mixed Use) 5-story, & HS (Hardy Street Overlay)/ Commercial
West: MX-3(Mixed Use) 3-story and EM-2 (Employment) 2 story / Undeveloped

Most Nearly Bounded By (streets): This parcel is accessible from the North by Hardy Street, from the West by S.31st Street, and from the East by S.30th Street, and is bounded to the South by Chevy Chase Drive.

Letters or Concerns stated: The Planning Division Office has not received any letters or other written communications relative to this case, as of October 27, 2016

History / Background: The Variances presented in this report meet the same intent as petitions presented on the April 6, 2016, Planning Commission Agenda for this development. The applicant has changed the subdividing of the lot so that the Variance percentages previously approved are no longer sufficient. Petition "J" from the April HPC agenda is no longer needed. Petition "O" from the April agenda will be modified by item "G" in this November agenda. Petitions "H" & "I" are required due to the presence of a newly created parcel. The overall footprint has not been significantly altered since the presentation in the April 6, 2016 report.

Variance Option for Item G: Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3)

Variance Option for Item H: Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.2 (B)** which states

a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

Variance Option for Item I:

Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.1 (F)** which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3)

Basis for Approval:

1. That special conditions and circumstances **(do / do not)** exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district;
2. That literal interpretation of the provisions of this Code **(would / would not)** deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code;
3. That the special conditions and circumstances **(do / do not)** result from the actions of the applicant;
4. That granting the variance requested **(will / will not)** confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.



Variance Information (1 page)

Note: No nonconforming use of neighboring lands, structures, or buildings in the same district, and no permitted or nonconforming use of lands, structures, or buildings in other districts shall be considered grounds for the issuance of a variance.

1. List reasons why you feel that the property could not be reasonably used without the requested

variance:

Market/tenant demands for parking versus code requirements. We are not able to develop this land without the level of parking we are requesting. The code encourages shared parking, however the shared parking with other sites is not in place at this time since we are the initial developer of land in this area. Also, there is also no existing on-street parking infrastructure for us to share your parking with. In addition, the odd shapes of the parcels we are attempting to develop make it impossible to meet all of the zoning requirements, because it would further reduce parking.

2. All of the following conditions must be met before a variance can be recommended.

Explain and justify your proposal's compliance with each condition:

- a. That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district.

We are the initial developer and the Form Based code encourages shared parking - which is not available for my site.

This causes the hardship for multiple variances.

- b. That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code.

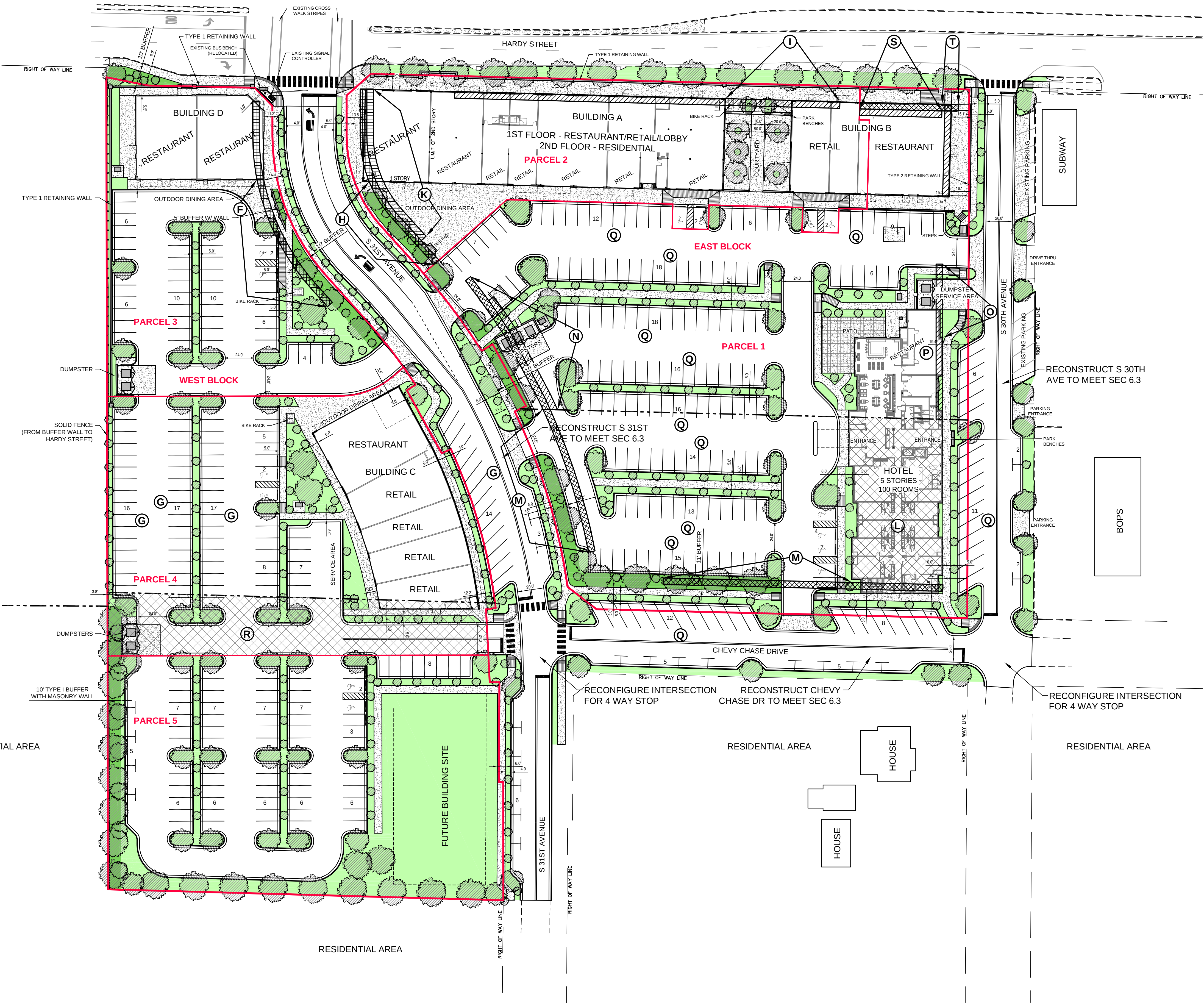
If we had no variances given to us we would be unable to do the project. There is not enough parking in the area to substantiate all the development required by code.

- c. That the special conditions and circumstances do not result from the actions of the applicant.

These are a result of the Form Based code. We are the first development and are unable to meet all of the requirements, mainly due to the lack of availability of parking. Secondly, our site is irregular and if we meet all of the zoning requirements we would lose even more parking.

- d. That granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

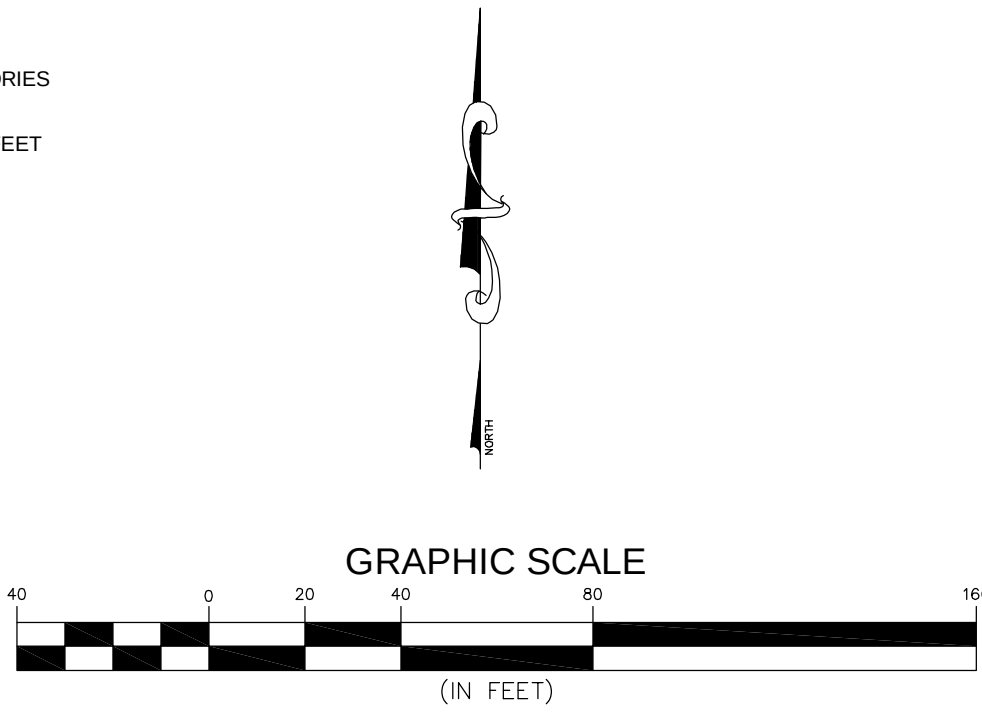
We are the first ones doing a major development that are required to meet this code. There is not the available amenities contemplated in the code and thus we can't do a development without these variances.



Internal Parking Islands by Block			
Block	Islands Required	Islands Provided	
West Block	7	4	
East Block	14	3	
Total	21	7	

Post Design Street Frontage Coverage Calculation					
Parcel - Zone - Street	Property Length	Units	Building Length	Units	Coverage Required / Coverage Provided
West Block - Parcel 1 - MX-3	Hardy Street	127.8 Ft	97.4 Ft	70%	76%
	S 31st Avenue	240.0 Ft	64.5 Ft	70%	27%
West Block - Parcel 2 - MX-3	S 31st Avenue	227.6 Ft	181.3 Ft	70%	80%
West Block - Parcel 3 - EM-2	S 31st Avenue (Future Development)	186.2 Ft	0.0 Ft	70%	0%
East Block - Parcel 1 - MX-4	S 31st Avenue	162.7 Ft	0.0 Ft	70%	0%
	Chevy Chase Drive	303.1 Ft	69.1 Ft	70%	23%
	S 30th Avenue	150.3 Ft	132.3 Ft	35%	88%
East Block - Parcel 1 - 1st Floor MX-5-HS	S 31st Avenue	126.9 Ft	0.0 Ft	90%	0%
	Hardy Street	82.8 Ft	69.7 Ft	90%	84%
	S 30th Avenue	250.5 Ft	153.6 Ft	45%	61%
East Block - Parcel 1 - 2nd Floor MX-5-HS	S 31st Avenue	126.9 Ft	0.0 Ft	75%	0%
	Hardy Street	82.8 Ft	0.0 Ft	75%	0%
	S 30th Avenue	250.5 Ft	83.6 Ft	75%	33%
East Block - Parcel 2 - 1st Floor MX-5-HS	S 31st Avenue	170.4 Ft	70.0 Ft	90%	41%
	Hardy Street	389.5 Ft	375.0 Ft	90%	96%
East Block - Parcel 2 - 2nd Floor MX-5-HS	S 31st Avenue	170.4 Ft	0.0 Ft	75%	0%
	Hardy Street	389.5 Ft	205.5 Ft	75%	53%

- L MAXIMUM BUILDING HEIGHT ALLOWED: 4 STORIES
DESIGNED BUILDING HEIGHT: 5 STORIES
- P MAXIMUM BUILDING SETBACK ALLOWED: 15 FEET
DESIGNED BUILDING SETBACK: 19.4 FEET
- R EXISTING ZONE: EM-2
PREFERRED ZONE: MX-3



12	06/26/16	UPDATED VARIANCES	RES
11	09/22/16	REVISED PARCEL LINES PER COMMENTS	RES
10	09/12/16	REVISED PARCEL LINES PER COMMENTS	RES
9	09/09/16	ADDED PARCEL LINES	RES
8	09/06/16	REVISED SITE PLAN	RES
7	06/28/16	REVISED SITE PLAN	RES
NO.	DATE	DESCRIPTION	BY

CONCEPTUAL SITE PLAN

THE DISTRICT AT MIDTOWN
MIDTOWN DEVELOPERS, LLC
HATTIESBURG, MISSISSIPPI

301 Second Ave. | Hattiesburg, MS 39401 | (p) 601.544.1821 | (f) 601.544.0501 | sdw.com

Drawn by: RES

Checked by: SEM

Date: 02-29-2016

Scale: AS NOTED

Drawing No.: 15861

Sheet No. 1 of 1

Post Design Street Frontage Coverage Calculation

Parcel - Zone - Street	Property Length	Units	Building Length	Units	Coverage Required	Coverage Provided
West Block - Parcel 1 - MX-3						
Hardy Street	127.8	Ft	97.4	Ft	70%	76%
S 31st Avenue	240.0	Ft	64.5	Ft	70%	27%
West Block - Parcel 2 - MX-3						
S 31st Avenue	227.6	Ft	181.3	Ft	70%	80%
West Block - Parcel 3 - EM-2						
S 31st Avenue (Future Development)	186.2	Ft	0.0	Ft	70%	0%
East Block - Parcel 1 - MX-4						
S 31st Avenue	162.7	Ft	0.0	Ft	70%	0%
Chevy Chase Drive	303.1	Ft	69.1	Ft	70%	23%
S 30th Avenue	150.3	Ft	132.3	Ft	35%	88%
East Block - Parcel 1 - 1st Floor MX-5-HS						
S 31st Avenue	126.9	Ft	0.0	Ft	90%	0%
Hardy Street	82.8	Ft	69.7	Ft	90%	84%
S 30th Avenue	250.5	Ft	153.6	Ft	45%	61%
East Block - Parcel 1 - 2nd Floor MX-5-HS						
S 31st Avenue	126.9	Ft	0.0	Ft	75%	0%
Hardy Street	82.8	Ft	0.0	Ft	75%	0%
S 30th Avenue	250.5	Ft	83.6	Ft	75%	33%
East Block - Parcel 2 - 1st Floor MX-5-HS						
S 31st Avenue	170.4	Ft	70.0	Ft	90%	41%
Hardy Street	389.5	Ft	375.0	Ft	90%	96%
East Block - Parcel 2 - 2nd Floor MX-5-HS						
S 31st Avenue	170.4	Ft	0.0	Ft	75%	0%
Hardy Street	389.5	Ft	205.5	Ft	75%	53%

Variance Needed	Variance Approved	Net Change
0%	3%	3%
43%	53%	10%
0%	0%	0%
70%	70%	70%
70%	70%	0%
47%	47%	0%
0%	0%	0%
90%	90%	0%
6%	0%	-6% *
0%	0%	0%
75%	75%	0%
75%	0%	-75% *
42%	27%	-15% **
49%	63%	14%
0%	0%	0%
75%	75%	0%
22%	22%	0%

* New Variance Required

** Change to Existing Variance Required



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-63

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: 3000 Hardy Street along Hardy Street - FBC Variance 3.15.1 (F)

Title: APPROVE or DENY a petition filed by Rob O. Tatum, Jr, Owner, to request a variance from Article 3, Section 3.15.1 (F) which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3). The Planning Commission recommended to APPROVE on November 2, 2016.

Type: Action Item

Drafter: Ginger Maddox

In Control: City Council

Reference:

Attachments: November PC Minutes (DRAFT), Image Sheet-Midtown- 3000 Hardy St, Staff Summary - Midtown- 3000 Hardy Street, Applicant Sheet - I - 3000 Hardy St, 3000 Hardy St - Conceptual Design_Variances, 3000 Hardy St - Revised Variance Calc

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
November 2, 2016**

The Hattiesburg Planning Commission did meet in a regular session on November 2, 2016 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Joseph White, Chairman, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Eric Martin
 Mark Miller
 Joseph White, Chairman

Commissioners Absent: Sandra Thompson
 Jessie Wilson

Also Present: Ginger Maddox, Planning Division Manager
 Melinda Green, Urban Development
 Armendia Esters, Planning Division

Chairman White declared the meeting of the Hattiesburg Planning Commission open and in session at 1:03 P.M.

INVOCATION
Commissioner White gave the invocation.

AGENDA REVIEW
There came the matter of the November 2016 Agenda. A request was made by Ginger Maddox, Planning Division Manager for a motion to remove Item E from the Agenda.
A request was made by Chairman White for a motion to approve the November 2016 Agenda with Item E removed from the Agenda. A motion was made to approve the November 2016 Agenda with Item E removed from the Agenda by Commissioner McMurtrey and seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Mark Miller
 Eric Martin

Commissioners voting nay: None

Commissioners abstaining: None

MINUTES REVIEW

There came the matter of the October 5, 2016 Minutes. A request was made by Chairman White for a motion to approve the October 5, 2016 minutes. A motion was made by Commissioner Corts to approve the minutes and seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Jessie Wilson

Commissioners voting nay: None

Commissioners abstaining: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report was provided to the commission of monthly and YTD Permit information for October, 2016.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox, Planning Division Manager. Ms. Maddox reported that there will be a Special Call session of the City Council to review the proposed Land Development Code. The Special Call will take place on November 28, 2016 at 4:00pm in Council Chambers. The Mayor and City Council have declared the month of October Planning Month for the city of Hattiesburg. The declaration aligns with the National recognition of October as Community Development and Planning Month. All other Planning Commission items, from October, were approved.

CHAIRMAN'S REPORT

There came the matter of the Chairman's Report. There was none.

PUBLIC HEARING

Chairman White declared the Public Hearing open at 1:18 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Variance), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 for a proposed Digital Billboard located on a certain property located at 4041 Old

Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	Leonard Busby, III	P.O. Box 6439	Laurel, MS
<u>Opponents:</u>	Norman Beasley	2055 Oak Grove Road	Hattiesburg, MS

Mr. Beasley stated that a new static billboard has been recently permitted for the Hwy 98/Old Hwy 11 intersection which would further prohibit Mr. Busby from meeting the required 1,250 radius required of all digital billboards. Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the petition. Commissioner Miller made a motion to deny the petition because special conditions and circumstances do not exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would not deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do result from the actions of the applicant; and that granting the variance requested will confer on the applicant special privileges that are denied by the code to other lands, structures, or buildings in the same district.

Commissioners voting aye: Dick Conville
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Eric Martin

Commissioners voting nay: Judy Corts

Commissioners abstaining: None

There came the matter of Item B (Use Permit Upon Review), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, remanded by the City Council on September 20, 2016, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a Use Permit Upon Review for a “Digital Billboard” as provided in Article 5, Section 95.10(3.1)(3) for certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Miller made a motion to deny the request because there is not public need for the proposed use, as opposed to the private interest of individual. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item C (Zoning Change), by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

	Name	Address	City/State
<u>Presented by:</u>	Dustin Gatlin	2203 Hardy Street	Hattiesburg, MS
	- Engineer, Walker Associates		
<u>Proponents:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
	- Forrest General Hospital		
<u>Opponents:</u>	Chad M. Sommers	125 Victoria Drive	Hattiesburg, MS
	Kendon Ellerman	108 Victoria Drive	Hattiesburg, MS

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because there is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property. The motion was seconded by Commissioner Corts.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item D (Variance), by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
<u>Proponents:</u>	Todd Jackson, ADP	One Convention Center Plaza	Hattiesburg, MS
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item F (Variance), by John Anglin, Engineer, David Chunn, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

	Name	Address	City/State
<u>Presented by:</u>	John Anglin Joe McMurry	6652 US Hwy 98 101 Hickory Circle	Hattiesburg, MS Petal, MS
<u>Proponents:</u>	None		

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item G (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item H (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item I (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.1 (F) which

states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

BUSINESS MEETING

There being no further business, Commissioner [REDACTED] made a motion to adjourn the meeting. The motion was seconded at Commissioner [REDACTED].

Joe White, Chairman

Pattie Brantley, AICP, Director of Urban Development.

SUBJECT PARCEL:

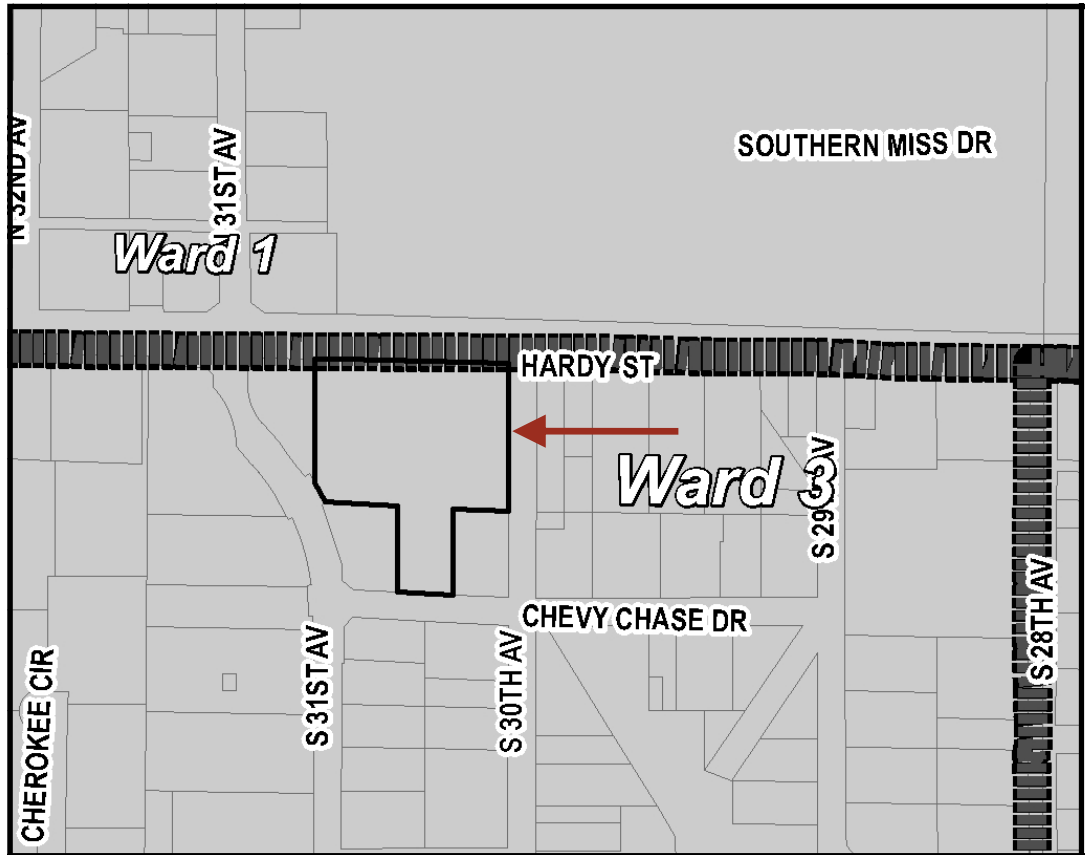
3000 Hardy Street

Robert O. Tatum, Jr.

The applicant requests a variance from Midtown Form-Based Code Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue; a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street; and a variance from Article 3, Section 3.15.1 (F) which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).



Vicinity Map—Ward 3



Zoning—MX-5 & MX-4



Site Aerial



SURROUNDING AREA

Northern Direction: R-3 (Multi-Family Residential) District / University of Southern Mississippi



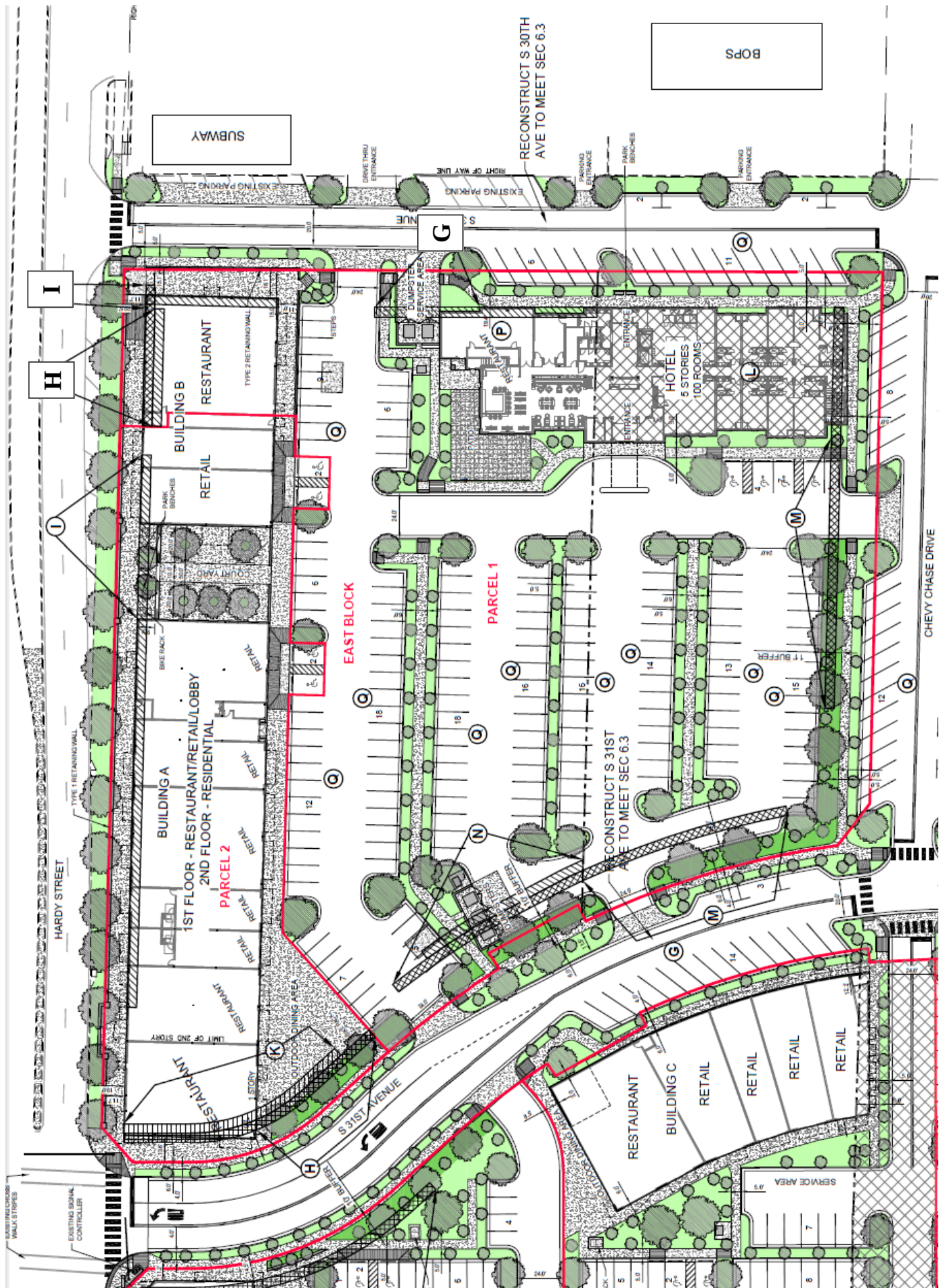
Southern Direction: MX-3(Mixed Use)
3 story / Vacant



Eastern Direction: MX-5 (Mixed Use)
5-story & HS (Hardy Street Overlay)/
Vacant



Western Direction: MX-3(Mixed Use)
3 story and EM-2 (Employment) 2
story / Parking Lot





**Planning Commission
Case Fact Sheet**

Property Owner: Robert O. Tatum, Jr

Address of Property:	Tax Parcels/Ward:	PPIN:	Ward:
3000 Hardy Street	028N-07-078.00	20837	3

Requests: **4 Variances from the Midtown Form-Based Code**

Purpose of Request: To consider an application to request a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue; a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street; and a **variance from Article 3, Section 3.15.1 (F)** which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

Applicant Summary: See Attached

Applicable Regulations:

SECTION 3.15 **Special Rules for the –HS Overlay District**

1. Lot, Placement

Build-to Zone (BTZ) - (F) Requires Building in primary street BTZ (min % of lot width)-90%.

2. Height

Building Height- (B) Street facing façade at min height (min% of lot width) - 75%.

Present Zoning: This parcel is zoned MX-5 (Mixed Use) 5-Story with the Hardy Street overlay District and MX-4 (Mixed Use) 4-Story.

Present Use: Undeveloped

Surrounding Zoning and Land Use:

North: R-3 (Multi-Family Residential) District / University of Southern Mississippi
South: MX-3(Mixed Use) 3-story / Undeveloped
East: MX-4 (Mixed Use) 4-story, MX-5 (Mixed Use) 5-story, & HS (Hardy Street Overlay)/ Commercial
West: MX-3(Mixed Use) 3-story and EM-2 (Employment) 2 story / Undeveloped

Most Nearly Bounded By (streets): This parcel is accessible from the North by Hardy Street, from the West by S.31st Street, and from the East by S.30th Street, and is bounded to the South by Chevy Chase Drive.

Letters or Concerns stated: The Planning Division Office has not received any letters or other written communications relative to this case, as of October 27, 2016

History / Background: The Variances presented in this report meet the same intent as petitions presented on the April 6, 2016, Planning Commission Agenda for this development. The applicant has changed the subdividing of the lot so that the Variance percentages previously approved are no longer sufficient. Petition "J" from the April HPC agenda is no longer needed. Petition "O" from the April agenda will be modified by item "G" in this November agenda. Petitions "H" & "I" are required due to the presence of a newly created parcel. The overall footprint has not been significantly altered since the presentation in the April 6, 2016 report.

Variance Option for Item G: Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.2 (B)** which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3)

Variance Option for Item H: Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.2 (B)** which states

a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

Variance Option for Item I:

Recommend **approval** or **denial** of a request for a **variance from Article 3, Section 3.15.1 (F)** which states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3)

Basis for Approval:

1. That special conditions and circumstances **(do / do not)** exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district;
2. That literal interpretation of the provisions of this Code **(would / would not)** deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code;
3. That the special conditions and circumstances **(do / do not)** result from the actions of the applicant;
4. That granting the variance requested **(will / will not)** confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.



Variance Information (1 page)

Note: No nonconforming use of neighboring lands, structures, or buildings in the same district, and no permitted or nonconforming use of lands, structures, or buildings in other districts shall be considered grounds for the issuance of a variance.

1. List reasons why you feel that the property could not be reasonably used without the requested

variance: Market/tenant demands for parking versus code requirements. We are not able to develop this land without the level of parking we are requesting. The code encourages shared parking, however the shared parking with other sites is not in place at this time since we are the initial developer of land in this area. Also, there is also no existing on-street parking infrastructure for us to share your parking with. In addition, the odd shapes of the parcels we are attempting to develop make it impossible to meet all of the zoning requirements, because it would further reduce parking.

2. All of the following conditions must be met before a variance can be recommended.

Explain and justify your proposal's compliance with each condition:

- a. That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district.

We are the initial developer and the Form Based code encourages shared parking - which is not available for my site.

This causes the hardship for multiple variances.

- b. That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code.

If we had no variances given to us we would be unable to do the project. There is not enough parking in the area to

substantiate all the development required by code.

- c. That the special conditions and circumstances do not result from the actions of the applicant.

These are a result of the Form Based code. We are the first development and are unable to meet all of the requirements,

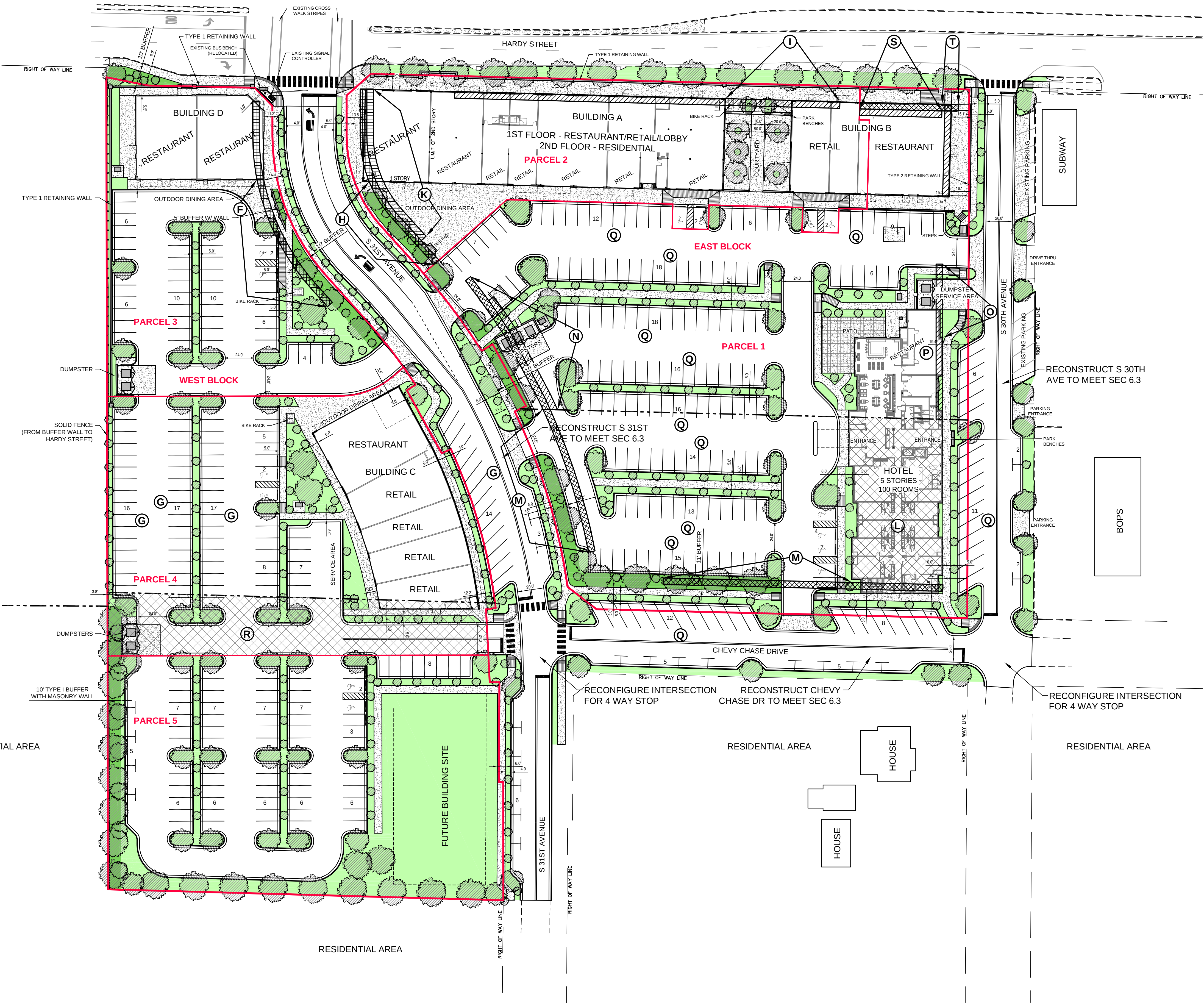
mainly due to the lack of availability of parking. Secondly, or site is irregular and if we meet all of the zoning requirements

we would lose even more parking.

- d. That granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district.

We are the first ones doing a major development that are required to meet this code. There is not the available amenities

contemplated in the code and thus we can't do a development without these variances.

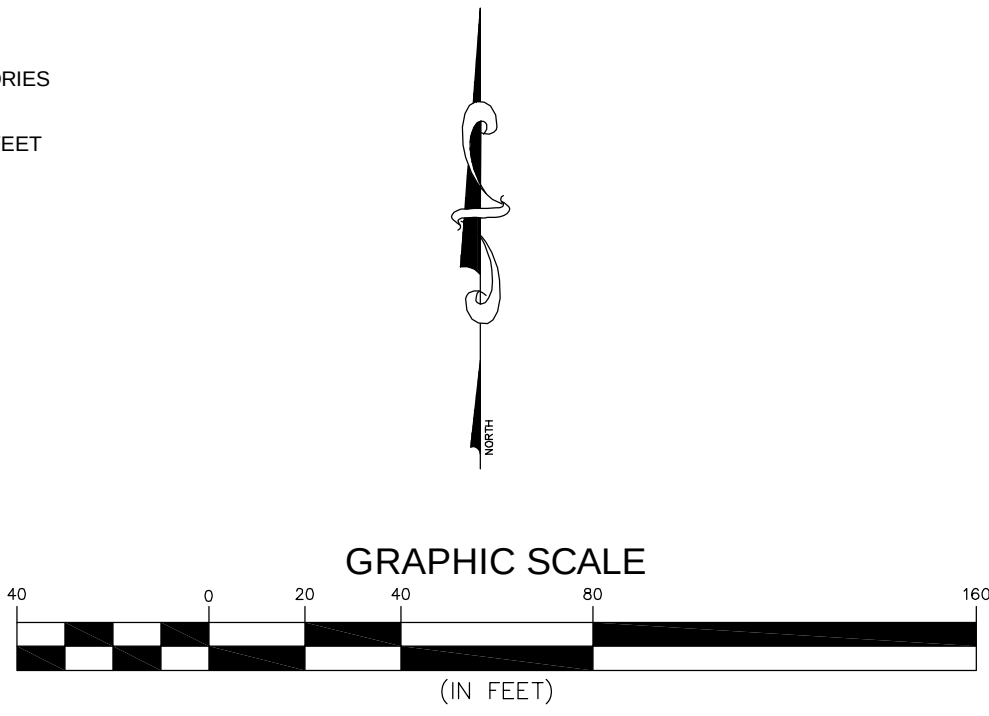


Internal Parking Islands by Block			
Block	Islands Required	Islands Provided	
West Block	7	4	
East Block	14	3	
Total	21	7	

Post Design Street Frontage Coverage Calculation

Parcel - Zone - Street	Property Length	Units	Building Length	Units	Coverage Required	Coverage Provided
West Block - Parcel 1 - MX-3						
Hardy Street	127.8 Ft		97.4 Ft		70%	76%
S 31st Avenue	240.0 Ft		64.5 Ft		70%	27%
West Block - Parcel 2 - MX-3						
S 31st Avenue	227.6 Ft		181.3 Ft		70%	80%
West Block - Parcel 3 - EM-2						
S 31st Avenue (Future Development)	186.2 Ft		0.0 Ft		70%	0%
East Block - Parcel 1 - MX-4						
S 31st Avenue	162.7 Ft		0.0 Ft		70%	0%
Chevy Chase Drive	303.1 Ft		69.1 Ft		70%	23%
S 30th Avenue	150.3 Ft		132.3 Ft		35%	88%
East Block - Parcel 1 - 1st Floor MX-5-HS						
S 31st Avenue	126.9 Ft		0.0 Ft		90%	0%
Hardy Street	82.8 Ft		69.7 Ft		90%	84%
S 30th Avenue	250.5 Ft		153.6 Ft		45%	61%
East Block - Parcel 1 - 2nd Floor MX-5-HS						
S 31st Avenue	126.9 Ft		0.0 Ft		75%	0%
Hardy Street	82.8 Ft		0.0 Ft		75%	0%
S 30th Avenue	250.5 Ft		83.6 Ft		75%	33%
East Block - Parcel 2 - 1st Floor MX-5-HS						
S 31st Avenue	170.4 Ft		70.0 Ft		90%	41%
Hardy Street	389.5 Ft		375.0 Ft		90%	96%
East Block - Parcel 2 - 2nd Floor MX-5-HS						
S 31st Avenue	170.4 Ft		0.0 Ft		75%	0%
Hardy Street	389.5 Ft		205.5 Ft		75%	53%

- (L) MAXIMUM BUILDING HEIGHT ALLOWED: 4 STORIES
DESIGNED BUILDING HEIGHT: 5 STORIES
- (P) MAXIMUM BUILDING SETBACK ALLOWED: 15 FEET
DESIGNED BUILDING SETBACK: 19.4 FEET
- (R) EXISTING ZONE: EM-2
PREFERRED ZONE: MX-3



12	06/26/16	UPDATED VARIANCES	RES
11	09/22/16	REVISED PARCEL LINES PER COMMENTS	RES
10	09/12/16	REVISED PARCEL LINES PER COMMENTS	RES
9	09/09/16	ADDED PARCEL LINES	RES
8	09/06/16	REVISED SITE PLAN	RES
7	06/28/16	REVISED SITE PLAN	RES
NO.	DATE	DESCRIPTION	BY

CONCEPTUAL SITE PLAN

THE DISTRICT AT MIDTOWN
MIDTOWN DEVELOPERS, LLC
HATTIESBURG, MISSISSIPPI

sdw

Engineering Progress

301 Second Ave. | Hattiesburg, MS 39401 | (p) 601.544.1821 | (f) 601.544.0501 | sdw.com

Drawn by: RES

Checked by: SEM

Date: 02-29-2016

Scale: AS NOTED

Drawing No.: 15861

Sheet No. 1 of 1

Post Design Street Frontage Coverage Calculation

Parcel - Zone - Street	Property Length	Units	Building Length	Units	Coverage Required	Coverage Provided
West Block - Parcel 1 - MX-3						
Hardy Street	127.8	Ft	97.4	Ft	70%	76%
S 31st Avenue	240.0	Ft	64.5	Ft	70%	27%
West Block - Parcel 2 - MX-3						
S 31st Avenue	227.6	Ft	181.3	Ft	70%	80%
West Block - Parcel 3 - EM-2						
S 31st Avenue (Future Development)	186.2	Ft	0.0	Ft	70%	0%
East Block - Parcel 1 - MX-4						
S 31st Avenue	162.7	Ft	0.0	Ft	70%	0%
Chevy Chase Drive	303.1	Ft	69.1	Ft	70%	23%
S 30th Avenue	150.3	Ft	132.3	Ft	35%	88%
East Block - Parcel 1 - 1st Floor MX-5-HS						
S 31st Avenue	126.9	Ft	0.0	Ft	90%	0%
Hardy Street	82.8	Ft	69.7	Ft	90%	84%
S 30th Avenue	250.5	Ft	153.6	Ft	45%	61%
East Block - Parcel 1 - 2nd Floor MX-5-HS						
S 31st Avenue	126.9	Ft	0.0	Ft	75%	0%
Hardy Street	82.8	Ft	0.0	Ft	75%	0%
S 30th Avenue	250.5	Ft	83.6	Ft	75%	33%
East Block - Parcel 2 - 1st Floor MX-5-HS						
S 31st Avenue	170.4	Ft	70.0	Ft	90%	41%
Hardy Street	389.5	Ft	375.0	Ft	90%	96%
East Block - Parcel 2 - 2nd Floor MX-5-HS						
S 31st Avenue	170.4	Ft	0.0	Ft	75%	0%
Hardy Street	389.5	Ft	205.5	Ft	75%	53%

Variance Needed	Variance Approved	Net Change
0%	3%	3%
43%	53%	10%
0%	0%	0%
70%	70%	70%
70%	70%	0%
47%	47%	0%
0%	0%	0%
90%	90%	0%
6%	0%	-6% *
0%	0%	0%
75%	75%	0%
75%	0%	-75% *
42%	27%	-15% **
49%	63%	14%
0%	0%	0%
75%	75%	0%
22%	22%	0%

* New Variance Required

** Change to Existing Variance Required



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-65

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Project Resolution Requisition No. 60 - 2013 Bonds

Title: Adopt a Resolution authorizing Requisition No. 60 from the Project Fund Construction Account in connection with certain loan agreement, dated as of December 19, 2013, by and between the Mississippi Development Bank and the City of Hattiesburg.

Type: Resolution

Drafter: Marie Harris

In Control: City Council

Reference: Lamar Rutland

Attachments: 2013 Bond Resolution No. 60

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

The City Council of the City of Hattiesburg, Mississippi (the “City”) acting for and on behalf of the City, took up for consideration the matter of requesting and authorizing Requisition No. 60 from the Project Fund Construction Account in connection with the loan agreement between the Mississippi Development Bank and the City dated December 19, 2014. After discussion of the subject, Council Member _____ offered and moved for the adoption of the following resolution:

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
HATTIESBURG, MISSISSIPPI (THE “CITY”) AUTHORIZING
REQUISITION NO. 60 FROM THE PROJECT FUND CONSTRUCTION
ACCOUNT IN CONNECTION WITH THAT CERTAIN LOAN
AGREEMENT, DATED AS OF DECEMBER 19, 2013, BY AND BETWEEN
THE MISSISSIPPI DEVELOPMENT BANK AND THE CITY.**

Whereas, on December 19, 2013 the City entered into a loan with the Mississippi Development Bank in an amount not to exceed \$28,000,000 (the “Loan”) pursuant to the terms and conditions of that certain loan agreement, dated as of December 19, 2013, by and between the Mississippi Development Bank and the City (the “Loan Agreement”).

Whereas, the City Council of the City now finds it necessary to approve Requisition No. 60 from the Project Fund Construction Account under the Loan in the total aggregate amount of \$ 139,712.45 for the purpose of paying Water & Sewer Projects in connection with the loan as more particularly described in Exhibit A.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE
CITY OF HATTIESBURG, MISSISSIPPI:**

SECTION 1. The City Council of the City hereby authorizes and approves Requisition No. 60 from the Project Fund Construction Account under the Loan in the total aggregate amount of **One Hundred Thirty-Nine Thousand Seven Hundred Twelve and 45/100 Dollars (\$ 139,712.45)** for the purpose of paying Water & Sewer Projects in connection with the loan as more particularly described in Exhibit A.

SECTION 2. The City Council hereby directs Hancock Bank, as Trustee to disburse funds of Requisition No. 60 in the total aggregate amount of **One Hundred Thirty-Nine Thousand Seven Hundred Twelve and 45/100 Dollars (\$ 139,712.45)** as authorized herein, as more particularly described in Exhibit A.

SECTION 3. The Mayor and City Clerk are hereby authorized and directed for and on behalf of the City to take any and all action as may be required by the City to carry out and give effect to the aforesaid documents authorized pursuant to this Resolution and to execute all papers, documents, certificates and other instruments that may be required for the carrying out of the authority conferred by this Resolution in order to evidence the authority.

The above and foregoing Resolution, after having been first reduced to writing, was introduced by Council Member _____ seconded by Council Member _____, and was adopted by the following vote, to wit:

YEAS:

NAYS:

ABSENT:

The motion having received the affirmative vote of a majority of the Council members present, the President declared the motion carried and the resolution adopted, on this the **22nd day of November, 2016.**

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the **22nd day of November, 2016.**

ATTEST:

APPROVED:

CITY CLERK

MAYOR

EXHIBIT A

PROJECT FUND CONSTRUCTION ACCOUNT REQUISITION

EXHIBIT A

PROJECT FUND CONSTRUCTION ACCOUNT REQUISITION

RE: \$28,000,000.00 Mississippi Development Bank Special Obligation Bonds, Series 2013 (Hattiesburg, Mississippi Combined Water and Sewer System Refunding and Construction Project) (the "Bonds") secured by \$28,000,000.00 Promissory Note (Hattiesburg, Mississippi Combined Water and Sewer System Refunding and Construction Project) (the "Note").

TO: Hancock Bank
 The Quarter Specialty Center
 1855 Lakeland Drive, Suite Q-230
 Jackson, Mississippi 39216
 ATTN: Trust and Financial Services Group

REQUISITION NO.: 60

DATE OF REQUISITION: 11/22/2016

Item #	Payee Name & Address	Budget Line Item	Payment Amount	Invoice #	Purpose of Payment
1	T.L. Wallace 4025 HWY 35 North Columbia, MS 39429	105695.7245.52	\$ 59,539.53	Pay Est. 12	Water Improvements Ph III Period: September 24 - October 26, 2016 MB 2015-241
2	Neel-Schaffer P.O. Box 1487 Hattiesburg, MS 39401	105695.6015	\$ 38,730.00	1039866-07	Wastewater Treatment Task 7 Local Workforce Involvement Model Program Period: August 1 - August 31, 2016 MB 2015-255 NS 12273.001
3	Neel-Schaffer P.O. Box 1487 Hattiesburg, MS 39401	105695.6015	\$ 41,442.92	1039867-01	WWTP Land App Mgt Task 9 General Consulting Period: August 1 - August 31, 2016 MB 2015-218-219 NS 12273.003

\$ 139,712.45

SHOWS, DEARMAN & WAITS, INC. - CONSULTING ENGINEERS -
Project: Comp. Water Improvements Phase III - Mobile & Bouie St. Area
City of Hattiesburg
Contractor: T.L. Wallace
4025 Hwy. 35 North, Columbia, MS 39429
Pay Estimate No.: Twelve (12)

Date: 11-3-2016

Pay Period: September 24 - October 28, 2016

Item No.	Item Description	Total Quantities			Unit	Price	Amount
		Quantity	Allowed This Period	Allowed To Date			
		On Contract	Period	To Date			
Site 1 - Columbia, Eupora, Lake, Phillipps & W 5 th Streets							
Water Pipe Items							
1	2" Class 350 Ductile Iron Water Pipe (Open Cut)	40		25.00	LF	\$ 15.00	\$ 375.00
2	6" Class 350 Ductile Iron Water Pipe (Open Cut)	1,310		1327.00	LF	\$ 23.00	\$ 30,521.00
3	8" Class 350 Ductile Iron Water Pipe (Open Cut)	920		902.00	LF	\$ 25.00	\$ 22,550.00
	Connection Items						
4	Connection: Proposed 8" Water Line to Existing 8" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 2,500.00	\$ 2,500.00
5	Connection: Proposed 8" Water Line to Existing 6" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,600.00	\$ 1,600.00
6	Connection: Proposed 6" Water Line to Proposed 6" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,500.00	\$ 1,500.00
7	Connection: Proposed 6" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	3		3.00	Each	\$ 1,900.00	\$ 5,700.00
8	Connection: Proposed 6" Water Line to Existing 2" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,200.00	\$ 1,200.00
	Valve and Hydrant Items						
9	2" Gate Valve	1		2.00	Each	\$ 550.00	\$ 1,100.00
10	6" Gate Valve	2		2.00	Each	\$ 775.00	\$ 1,550.00
11	8" Gate Valve	1		1.00	Each	\$ 1,100.00	\$ 1,100.00
12	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	4		4.00	Each	\$ 3,325.00	\$ 13,300.00
	Water Service Items						
13	Service Tubing (Bored) (Size Varies to 1 1/2") Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	215		127.00	LF	\$ 24.00	\$ 3,048.00
14	Residential Meter (Incl: Meter, Meter Box, City Fees, etc)	1		2.00	Each	\$ 430.00	\$ 860.00
	Miscellaneous Construction Items						
16	Concrete Pavement Repair (All Depths)	115		79.70	SY	\$ 120.00	\$ 9,564.00
17	Asphalt Pavement Repair (All Depths)	500		281.50	SY	\$ 88.00	\$ 24,772.00
18	Concrete Curb & Gutter Repair (All Types)	166			LF	\$ 35.00	\$ -
19	Concrete Sidewalk Repair	17	2.70	18.30	SY	\$ 130.00	\$ 2,379.00
20	Temporary Erosion Control	1		0.90	LS	\$ 2,400.00	\$ 2,160.00
21	Grassing	1	1.00	1.00	LS	\$ 800.00	\$ 800.00
22	Mobilization	1		1.00	LS	\$ 17,000.00	\$ 17,000.00
23	Maintenance of Traffic	1	0.05	1.00	LS	\$ 2,400.00	\$ 2,400.00
						Sub-total	\$ 152,249.00
	Site 2 - Montague Street						\$63,522.00
	Water Pipe Items						
1	6" Class 350 Ductile Iron Water Pipe (Open Cut)	20		8.00	LF	\$ 40.00	\$ 320.00
2	8" Class 350 Ductile Iron Water Pipe (Open Cut)	650		636.00	LF	\$ 26.00	\$ 16,536.00
	Connection Items						
3	Connection: Proposed 8" Water Line to Existing 20" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 8,550.00	\$ 8,550.00
4	Connection: Proposed 8" Water Line to Existing 6" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,500.00	\$ 1,500.00
	Valve and Hydrant Items						
5	6" Gate Valve	2		2.00	Each	\$ 775.00	\$ 1,550.00
6	8" Gate Valve	1		1.00	Each	\$ 1,100.00	\$ 1,100.00
7	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	1		1.00	Each	\$ 3,325.00	\$ 3,325.00
	Water Service Items						
8	Service Tubing (Bored) (Size Varies to 1 1/2")	180		168.00	LF	\$ 24.00	\$ 4,032.00

CONTRACT TOTAL: \$1,722,687.00

\$182,725.00

2015-241
1056957245.52

Item No.	Item Description	Total Quantities			Unit	Unit		Amount
		Quantity On Contract	Allowed This Period	Allowed To Date		Price	Amount	
9	Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	15		15.00	Each	\$ 285.00	\$ 4,275.00	
	Miscellaneous Construction Items							
10	Concrete Pavement Repair (All Depths)	38	4.40	4.40	SY	\$ 124.00	\$ 545.60	
11	Asphalt Pavement Repair (All Depths)	92		25.20	SY	\$ 95.00	\$ 2,394.00	
12	Concrete Curb & Gutter Repair (All Types)	25			LF	\$ 52.00	\$ -	
13	Temporary Erosion Control	1		0.95	LS	\$ 750.00	\$ 712.50	
14	Grassing	1	0.95	0.95	LS	\$ 800.00	\$ 760.00	
15	Mobilization	1		1.00	LS	\$ 4,000.00	\$ 4,000.00	
16	Maintenance of Traffic	1		0.95	LS	\$ 900.00	\$ 855.00	
						Sub-total	\$ 50,455.10	
	Site 3 - McLaurin Street						\$46,565.00	
	Water Pipe Items							
1	6" Class 350 Ductile Iron Water Pipe (Open Cut)	660		638.00	LF	\$ 23.00	\$ 14,674.00	
	Connection Items							
2	Connection: Proposed 6" Water Line to Existing 20" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 8,550.00	\$ 8,550.00	
	Connection: Proposed 6" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 1,900.00	\$ 1,900.00	
	Valve and Hydrant Items							
	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	1		1.00	Each	\$ 3,325.00	\$ 3,325.00	
	Water Service Items							
5	Service Tubing (Bored) (Size Varies to 1 1/2")	70		40.00	LF	\$ 24.00	\$ 960.00	
	Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	3		3.00	Each	\$ 285.00	\$ 855.00	
	Miscellaneous Construction Items							
7	Concrete Pavement Repair (All Depths)	20	21.00	21.00	SY	\$ 124.00	\$ 2,604.00	
8	Asphalt Pavement Repair (All Depths)	35		16.00	SY	\$ 95.00	\$ 1,520.00	
9	Concrete Curb & Gutter Repair (All Types)	40			LF	\$ 63.00	\$ -	
10	Concrete Sidewalk Repair	2	3.80	3.80	SY	\$ 150.00	\$ 570.00	
11	Temporary Erosion Control	1	0.05	1.00	LS	\$ 750.00	\$ 750.00	
12	Grassing	1	1.00	1.00	LS	\$ 800.00	\$ 800.00	
13	Mobilization	1		1.00	LS	\$ 4,000.00	\$ 4,000.00	
14	Maintenance of Traffic	1		0.95	LS	\$ 900.00	\$ 855.00	
						Sub-total	\$ 41,363.00	
	Site 4 - E 9th, Coit, E 10th, Lula, Inez, Allen, Gravel, Heiddle & Kinnard St's						\$544,752.00	
	Water Pipe Items							
1	1" Sch 80 PVC (Open Cut)	10			LF	\$ 15.00	\$ -	
2	2" Class 350 Ductile Iron Water Pipe (Open Cut)	20			LF	\$ 20.00	\$ -	
3	4" Class 350 Ductile Iron Water Pipe (Open Cut)	20		2.00	LF	\$ 30.00	\$ 60.00	
4	6" Class 350 Ductile Iron Water Pipe (Open Cut)	3,670		3,407.00	LF	\$ 23.00	\$ 78,361.00	
5	8" Class 350 Ductile Iron Water Pipe (Open Cut)	2,875		2,972.00	LF	\$ 26.00	\$ 77,272.00	
6	12" Class 350 Ductile Iron Water Pipe (Open Cut)	1,030		1007.00	LF	\$ 45.00	\$ 45,315.00	
7	16" 200 PSI, DR9, HDPE (Open Cut) (Incl. adapter fittings)	100		100.00	LF	\$ 87.00	\$ 8,700.00	
8	20" Steel Casing, 0.25" WT (Bored)	80		80.00	LF	\$ 138.00	\$ 11,040.00	
	Connection Items							
9	Connection: Proposed 12" Water Line to Proposed 8" & 6" Water Lines (Cross & other fittings)	1		1.00	Each	\$ 2,200.00	\$ 2,200.00	
10	Connection: Proposed 12" Water Line to Existing 12" Water Line (Hot Tap w/ Valve Assembly)	2		2.00	Each	\$ 3,950.00	\$ 7,900.00	
11	Connection: Proposed 8" Water Line to Existing 12" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 2,550.00	\$ 2,550.00	
12	Connection: Proposed 8" Water Line to Existing 6" Water Line (Cross & other fittings)	1			Each	\$ 2,000.00	\$ -	
13	Connection: Proposed 8" Water Line to Existing 6" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,600.00	\$ 1,600.00	
14	Connection: Proposed 8" Water Line to Existing 4" Water Line (Tee & other fittings)	1			Each	\$ 1,400.00	\$ -	
15	Connection: Proposed 8" Water Line to Proposed 6" Water Line (Tee & other fittings)	3		3.00	Each	\$ 1,800.00	\$ 5,400.00	

Item No.	Item Description	Total Quantities			Unit	Price	Amount
		Quantity On Contract	Allowed This Period	Allowed To Date			
16	Connection: Proposed 6" Water Line to Proposed 6" Water Line (Tee & other fittings)	1			Each	\$1,400.00	\$ -
17	Connection: Proposed 6" Water Line to Existing 6" Water Line (Cross & other fittings)	1		1.00	Each	\$ 1,500.00	\$ 1,500.00
18	Connection: Proposed 6" Water Line to Existing 6" Water Line (Tee & other fittings)	3			Each	\$ 1,600.00	\$ -
19	Connection: Proposed 6" Water Line to Existing 1" Water Line (Hot Tap w/ Valve Assembly)	1			Each	\$ 375.00	\$ -
20	Connection: Proposed 4" Water Line to Existing 2" Water Line (Straight Connection & other fittings)	1		1.00	Each	\$ 275.00	\$ 275.00
	Valve and Hydrant Items						
21	4" Gate Valve	1		1.00	Each	\$ 700.00	\$ 700.00
22	6" Gate Valve	18		14.00	Each	\$ 775.00	\$ 10,850.00
23	8" Gate Valve	11		11.00	Each	\$ 1,100.00	\$ 12,100.00
24	12" Gate Valve	4		4.00	Each	\$ 2,000.00	\$ 8,000.00
25	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	18		18.00	Each	\$ 3,325.00	\$ 59,850.00
	Water Service Items						
26	Service Tubing (Bored) (Size Varies to 1 1/2")	1,240		1015.00	LF	\$ 24.00	\$ 24,360.00
27	Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	56		59.00	Each	\$ 275.00	\$ 16,225.00
28	Commercial Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	2			Each	\$ 1,000.00	\$ -
29	Residential Meter (Incl: Meter, Meter Box, City Fees, etc)	6		1.00	Each	\$ 433.00	\$ 433.00
	Miscellaneous Construction Items						
30	Removal of Fire Hydrant and Appurtenances	2		2.00	Each	\$ 250.00	\$ 500.00
31	Concrete Paved Ditch	4	2.60	2.60	CY	\$ 675.00	\$ 1,755.00
32	Concrete Pavement Repair (All Depths)	78	51.10	51.10	SY	\$ 115.00	\$ 5,876.50
33	Asphalt Pavement Repair (All Depths)	954		274.70	SY	\$ 86.00	\$ 23,624.20
34	Concrete Sidewalk Repair	26	7.20	7.20	SY	\$ 130.00	\$ 936.00
35	Temporary Erosion Control	1	0.10	1.00	LS	\$ 5,500.00	\$ 5,500.00
36	Grassing	1	0.75	1.00	LS	\$ 2,500.00	\$ 2,500.00
37	Mobilization	1		1.00	LS	\$ 37,000.00	\$ 37,000.00
						Sub-total	\$ 452,382.70
	Site 5 - Atlanta Street						\$121,974.00
	Water Pipe Items						
1	2" Class 350 Ductile Iron Water Pipe (Open Cut)	20		137.50	LF	\$ 20.00	\$ 2,750.00
2	6" Class 350 Ductile Iron Water Pipe (Open Cut)	20		8.00	LF	\$ 30.00	\$ 240.00
3	8" Class 350 Ductile Iron Water Pipe (Open Cut)	1,410		1406.00	LF	\$ 26.00	\$ 36,556.00
	Connection Items						
4	Connection: Proposed 8" Water Line to Existing 12" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 2,600.00	\$ 2,600.00
5	Connection: Proposed 8" Water Line to Existing 8" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 2,600.00	\$ 2,600.00
6	Connection: Proposed 8" Water Line to Existing 6" Water Line (Cross & other fittings)	1		1.00	Each	\$ 1,800.00	\$ 1,800.00
7	Connection: Proposed 8" Water Line to Existing 2" Water Line (Hot Tap w/ Valve Assembly)	2			Each	\$ 700.00	\$ -
	Valve and Hydrant Items						
8	6" Gate Valve	2		2.00	Each	\$ 775.00	\$ 1,550.00
9	8" Gate Valve	2		2.00	Each	\$ 1,100.00	\$ 2,200.00
10	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	3		3.00	Each	\$ 3,225.00	\$ 9,675.00
	Water Service Items						
11	Service Tubing (Bored) (Size Varies to 1 1/2")	640		444.00	LF	\$ 24.00	\$ 10,656.00
12	Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	25		27.00	Each	\$ 290.00	\$ 7,830.00
13	Residential Meter (Incl: Meter, Meter Box, City Fees, etc)	1			Each	\$ 435.00	\$ -

Item No.	Item Description	Total Quantities			Unit	Unit		Amount
		Quantity On Contract	Allowed This Period	Allowed To Date		Price		
	Miscellaneous Construction Items							
14	Removal of Fire Hydrant and Appurtenances	1			Each	\$ 250.00	\$	-
15	Concrete Pavement Repair (All Depths)	55	19.00	19.00	SY	\$ 120.00	\$	2,280.00
16	Asphalt Pavement Repair (All Depths)	233		62.70	SY	\$ 88.00	\$	5,517.60
17	Concrete Curb & Gutter Repair (All Types)	10			LF	\$ 80.00	\$	-
18	Concrete Sidewalk Repair	3			SY	\$ 130.00	\$	-
19	Temporary Erosion Control	1		0.95	LS	\$ 1,000.00	\$	950.00
20	Grassing	1	0.90	0.90	LS	\$ 800.00	\$	720.00
21	Mobilization	1		1.00	LS	\$ 7,300.00	\$	7,300.00
22	Maintenance of Traffic	1		0.95	LS	\$ 1,800.00	\$	1,710.00
					Sub-total	\$		96,934.60
	Site 6 - E 9th Street							\$83,249.00
	Water Pipe Items							
1	2" Class 350 Ductile Iron Water Pipe (Open Cut)	40			LF	\$ 15.00	\$	-
2	4" Class 350 Ductile Iron Water Pipe (Open Cut)	20			LF	\$ 30.00	\$	-
3	6" Class 350 Ductile Iron Water Pipe (Open Cut)	920		887.00	LF	\$ 22.00	\$	19,514.00
	Connection Items							
4	Connection: Proposed 6" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	2		2.00	Each	\$ 1,900.00	\$	3,800.00
5	Connection: Proposed 6" Water Line to Existing 4" Water Line (Tee & other fittings)	1			Each	\$ 1,300.00	\$	-
	Connection: Proposed 6" Water Line to Existing 2" Water Line (Hot Tap w/ Valve Assembly)	2			Each	\$ 650.00	\$	-
	Valve and Hydrant Items							
7	4" Gate Valve	1		1.00	Each	\$ 700.00	\$	700.00
8	8" Gate Valve	2			Each	\$ 1,100.00	\$	-
9	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	2		2.00	Each	\$ 3,325.00	\$	6,650.00
	Water Service Items							
	Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	7		6.00	Each	\$ 285.00	\$	1,710.00
10	Residential Meter (Incl: Meter, Meter Box, City Fees, etc)	1			Each	\$ 432.00	\$	-
	Miscellaneous Construction Items							
12	Concrete Pavement Repair (All Depths)	11			SY	\$ 127.00	\$	-
13	Asphalt Pavement Repair (All Depths)	355		69.80	SY	\$ 87.00	\$	6,072.60
14	Concrete Curb & Gutter Repair (All Types)	10			LF	\$ 85.00	\$	-
15	Concrete Sidewalk Repair	15			SY	\$ 130.00	\$	-
16	Temporary Erosion Control	1	0.10	0.80	LS	\$ 750.00	\$	600.00
17	Grassing	1	2.00	2.00	LS	\$ 800.00	\$	1,600.00
18	Mobilization	1		1.00	LS	\$ 5,000.00	\$	5,000.00
19	Maintenance of Traffic	1		0.70	LS	\$ 1,800.00	\$	1,260.00
					Sub-total	\$		46,906.60
	Site 7 - Whitney, E 8th & E 10th Streets							\$302,261.00
	Water Pipe Items							
1	2" Class 350 Ductile Iron Water Pipe (Open Cut)	20		15.00	LF	\$ 20.00	\$	300.00
2	4" Class 350 Ductile Iron Water Pipe (Open Cut)	20		14.00	LF	\$ 30.00	\$	420.00
3	6" Class 350 Ductile Iron Water Pipe (Open Cut)	1,650		1740.36	LF	\$ 22.00	\$	38,287.92
4	8" Class 350 Ductile Iron Water Pipe (Open Cut)	2,325		2224.00	LF	\$ 26.00	\$	57,824.00
	Connection Items							
5	Connection: Proposed 8" Water Line to Proposed 8" Water Line (Tee & other fittings)	1			Each	\$ 1,600.00	\$	-
6	Connection: Proposed 8" Water Line to Proposed 6" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,600.00	\$	1,600.00
	Connection: Proposed 8" Water Line to Existing 8" Water Line (Hot Tap w/ Valve Assembly)	1		2.00	Each	\$ 2,500.00	\$	5,000.00
8	Connection: Proposed 8" Water Line to Existing 6" Water Line (Cross & other fittings)	1		1.00	Each	\$ 2,000.00	\$	2,000.00
9	Connection: Proposed 8" Water Line to Existing 6" Water Line (Tee & other fittings)	2			Each	\$ 1,900.00	\$	-
10	Connection: Proposed 8" Water Line to Existing 2" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 650.00	\$	650.00

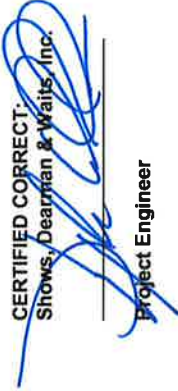
Item No.	Item Description	Total Quantities			Unit		Amount
		Quantity On Contract	Allowed This Period	Allowed To Date	Unit	Price	
11	Connection: Proposed 8" Water Line to Existing 1" Water Line (Hot Tap w/ Valve Assembly)	2		2.00	Each	\$ 400.00	\$ 800.00
12	Connection: Proposed 6" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	1		5.00	Each	\$ 1,900.00	\$ 9,500.00
13	Connection: Proposed 6" Water Line to Existing 6" Water Line (Cross & other fittings)	1			Each	\$ 1,900.00	\$ -
14	Connection: Proposed 6" Water Line to Existing 4" Water Line (Cross & other fittings)	1		1.00	Each	\$ 1,800.00	\$ 1,800.00
	Valve and Hydrant Items						
15	4" Gate Valve	2		2.00	Each	\$ 700.00	\$ 1,400.00
16	6" Gate Valve	12		5.00	Each	\$ 800.00	\$ 4,000.00
17	8" Gate Valve	7		4.00	Each	\$ 1,100.00	\$ 4,400.00
	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	6		6.00	Each	\$ 3,325.00	\$ 19,950.00
	Water Service Items						
19	Service Tubing (Bored) (Size Varies to 1 1/2") Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	755		526.00	LF	\$ 24.00	\$ 12,624.00
20	Residential Meter (Incl: Meter, Meter Box, City Fees, etc)	1		36.00	Each	\$ 290.00	\$ 10,440.00
	Miscellaneous Construction Items				Each	\$ 432.00	\$ -
22	Removal of Fire Hydrant and Appurtenances	3		2.00	Each	\$ 250.00	\$ 500.00
23	Concrete Pavement Repair (All Depths)	155	7.50	7.50	SY	\$ 115.00	\$ 862.50
24	Asphalt Pavement Repair (All Depths)	759		200.90	SY	\$ 86.00	\$ 17,277.40
25	Concrete Curb & Gutter Repair (All Types)	50			LF	\$ 50.00	\$ -
26	Concrete Sidewalk Repair	12	2.20	2.20	SY	\$ 130.00	\$ 286.00
27	Temporary Erosion Control	1	0.20	0.90	LS	\$ 5,900.00	\$ 5,310.00
28	Grassing	1	1.00	1.00	LS	\$ 1,500.00	\$ 1,500.00
29	Mobilization	1		1.00	LS	\$ 19,500.00	\$ 19,500.00
30	Maintenance of Traffic	1	0.10	0.90	LS	\$ 2,350.00	\$ 2,115.00
						Sub-total	\$ 218,346.82
	Site 8 - E 6th Street						\$84,447.00
	Water Pipe Items						
1	2" Class 350 Ductile Iron Water Pipe (Open Cut)	20		55.00	LF	\$ 20.00	\$ 1,100.00
2	6" Class 350 Ductile Iron Water Pipe (Open Cut)	980		1075.00	LF	\$ 23.00	\$ 24,725.00
	Connection Items						
3	Connection: Proposed 6" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	2		3.00	Each	\$ 1,900.00	\$ 5,700.00
4	Connection: Proposed 6" Water Line to Existing 2" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 650.00	\$ 650.00
	Valve and Hydrant Items						
5	6" Gate Valve	2		4.00	Each	\$ 800.00	\$ 3,200.00
6	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	3		3.00	Each	\$ 3,325.00	\$ 9,975.00
	Water Service Items						
7	Service Tubing (Bored) (Size Varies to 1 1/2") Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	80		72.00	LF	\$ 24.00	\$ 1,728.00
8		7		6.00	Each	\$ 285.00	\$ 1,710.00
	Miscellaneous Construction Items						
9	Concrete Pavement Repair (All Depths)	44	8.20	8.20	SY	\$ 122.00	\$ 1,000.40
10	Asphalt Pavement Repair (All Depths)	301			SY	\$ 89.00	\$ -
11	Concrete Curb & Gutter Repair (All Types)	20			LF	\$ 65.00	\$ -
12	Concrete Sidewalk Repair	2			SY	\$ 130.00	\$ -
13	Temporary Erosion Control	1	0.30	0.90	LS	\$ 750.00	\$ 675.00
14	Grassing	1	1.00	1.00	LS	\$ 800.00	\$ 800.00
15	Mobilization	1		1.00	LS	\$ 5,400.00	\$ 5,400.00
16	Maintenance of Traffic	1	0.10	0.70	LS	\$ 900.00	\$ 630.00
						Sub-total	\$ 57,293.40
	Site 9 - E 5th & Short E 5th Streets & Ferguson Alley						\$112,215.00
	Water Pipe Items						
1	2" Class 350 Ductile Iron Water Pipe (Open Cut)	20		10.00	LF	\$ 20.00	\$ 200.00
2	4" Class 350 Ductile Iron Water Pipe (Open Cut)	230		207.00	LF	\$ 30.00	\$ 6,210.00

Item No.	Item Description	Total Quantities			Unit	Unit	
		Quantity On Contract	Allowed This Period	Allowed To Date		Price	Amount
3	6" Class 350 Ductile Iron Water Pipe (Open Cut)	1,090		1062.00	LF	\$ 23.00	\$ 24,426.00
	Connection Items						
4	Connection: Proposed 6" Water Line to Proposed 6" & 4" Water Lines (Tee & other fittings)	1		1.00	Each	\$ 1,500.00	\$ 1,500.00
5	Connection: Proposed 6" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	2		2.00	Each	\$1,900.00	\$ 3,800.00
6	Connection: Proposed 4" Water Line to Existing 2" Water Line (Straight Connection & other fittings)	1		1.00	Each	\$300.00	\$ 300.00
	Valve and Hydrant Items						
7	4" Gate Valve	1		1.00	Each	\$ 700.00	\$ 700.00
8	6" Gate Valve	1		2.00	Each	\$ 800.00	\$ 1,600.00
9	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	4		4.00	Each	\$ 3,325.00	\$ 13,300.00
	Water Service Items						
10	Service Tubing (Bored) (Size Varies to 1 1/2") Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	60		128.00	LF	\$ 24.00	\$ 3,072.00
11	Miscellaneous Construction Items	9		5.00	Each	\$ 285.00	\$ 1,425.00
12	Removal of Fire Hydrant and Appurtenances	1		1.00	Each	\$ 250.00	\$ 250.00
13	Concrete Pavement Repair (All Depths)	13	18.10	18.10	SY	\$ 150.00	\$ 2,715.00
14	Asphalt Pavement Repair (All Depths)	460			SY	\$ 88.00	\$ -
15	Concrete Curb & Gutter Repair (All Types)	20			LF	\$ 65.00	\$ -
16	Concrete Sidewalk Repair	2	4.00	4.00	SY	\$ 130.00	\$ 520.00
17	Temporary Erosion Control	1	0.40	0.90	LS	\$ 1,000.00	\$ 900.00
18	Grassing	1	0.90	0.90	LS	\$ 800.00	\$ 720.00
19	Mobilization	1		1.00	LS	\$ 7,000.00	\$ 7,000.00
20	Maintenance of Traffic	1	0.30	0.80	LS	\$ 2,400.00	\$ 1,920.00
					Sub-total	\$	\$ 70,558.00
	Site 10 - River, E 6th & E 5th Streets & Beta Avenue						\$180,977.00
	Water Pipe Items						
1	1" Sch 80 PVC (Open Cut)	10			LF	\$ 15.00	\$ -
2	2" Class 350 Ductile Iron Water Pipe (Open Cut)	270		244.00	LF	\$ 20.00	\$ 4,880.00
3	6" Class 350 Ductile Iron Water Pipe (Open Cut)	2,760		2504.00	LF	\$ 23.00	\$ 57,592.00
	Connection Items						
4	Connection: Proposed 6" Water Line to Proposed 6" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,300.00	\$ 1,300.00
5	Connection: Proposed 6" Water Line to Proposed 6" & 2" Water Lines (Tee & other fittings)	1		1.00	Each	\$ 1,400.00	\$ 1,400.00
6	Connection: Proposed 6" Water Line to Proposed 6" & Existing 2" Water Lines (Tee & other fittings)	1		1.00	Each	\$1,100.00	\$ 1,100.00
7	Connection: Proposed 6" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$1,900.00	\$ 1,900.00
8	Connection: Proposed 6" Water Line to Existing 6" Water Line (Tee & other fittings)	1		1.00	Each	\$ 1,400.00	\$ 1,400.00
9	Connection: Proposed 6" Water Line to Existing 6" Water Line (Straight Connection & other fittings)	1		1.00	Each	\$ 600.00	\$ 600.00
10	Connection: Proposed 2" Water Line to Existing 6" Water Line (Hot Tap w/ Valve Assembly)	1		1.00	Each	\$ 850.00	\$ 850.00
11	Connection: Proposed 2" Water Line to Existing 2" Water Line (Tee & other fittings)	1		1.00	Each	\$ 400.00	\$ 400.00
	Valve and Hydrant Items						
12	2" Gate Valve	2		1.00	Each	\$ 600.00	\$ 600.00
13	6" Gate Valve	6		6.00	Each	\$ 800.00	\$ 4,800.00
14	3 Way Fire Hydrant w/ Appurtenances (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	6		6.00	Each	\$ 3,325.00	\$ 19,950.00
15	Blow-Off Valve w/ Appurtenances (Incl. Tee, Valve, Pipe & other fittings)	1		1.00	Each	\$ 900.00	\$ 900.00
	Water Service Items						
16	Service Tubing (Bored) (Size Varies to 1 1/2")	60		64.00	LF	\$ 24.00	\$ 1,536.00

Item No.	Item Description	Total Quantities			Unit	Unit		Amount
		Quantity On Contract	Allowed This Period	Allowed To Date		Price		
	Residential Service Tap (All Sizes) (Incl: Open Cut Service Tubing, Tapping Saddle, Corp Stop, etc)	19		12	Each	\$ 285.00	\$	3,420.00
17	Miscellaneous Construction Items							
18	Removal of Fire Hydrant and Appurtenances	2	2.00	2.00	Each	\$ 250.00	\$	500.00
19	Concrete Pavement Repair (All Depths)	39	7.50	7.50	SY	\$ 120.00	\$	900.00
20	Asphalt Pavement Repair (All Depths)	469			SY	\$ 88.00	\$	-
21	Concrete Curb & Gutter Repair (All Types)	20			LF	\$ 65.00	\$	-
22	Concrete Sidewalk Repair	8	1.60	1.60	SY	\$ 130.00	\$	208.00
23	Temporary Erosion Control	1	0.90	0.90	LS	\$ 2,200.00	\$	1,980.00
24	Grassing	1	0.90	0.90	LS	\$ 1,500.00	\$	1,350.00
25	Mobilization	1	1.00	1.00	LS	\$ 15,000.00	\$	15,000.00
26	Maintenance of Traffic	1	0.60	0.60	LS	\$ 1,800.00	\$	1,080.00
					Sub-total	\$		184,820.00
					TOTAL SITES 1-10	\$		1,371,309.22

Total Earned - Regular Work	\$ 1,371,309.22
Less 5% Retainage	\$ 68,565.46
Stored Materials	\$ 15,770.70
Total Due - Regular Work	1,318,514.46
Less Previous Payments	\$ 1,258,974.93
Net Amount Due This Estimate	\$ 59,539.53
Less Deductions	\$ -
Net Payment Due	\$ 59,539.53

Percent Complete: 80%
Time Elapsed to date: 115%

CERTIFIED CORRECT:
Shows, Dearman & Waits, Inc.

Project Engineer

APPROVED:

OWNER



RECEIVED
11-8-14

August 31, 2016
Project No: NS.12273.003
Invoice No: 1039867-01

City of Hattiesburg
Attn: Lamar Rutland, P.E.
P.O. Box 1898
Hattiesburg, MS 39403-1898

Project NS.12273.003 City of Hattiesburg – General Consulting – Task #9 – Land App Program Mgmt Services
Professional Services from August 01, 2016 to August 30, 2016

Phase 001 Acquisition Phase

Professional Personnel

	Hours	Rate	Amount
Administrative Services Manager			
Nobles, Jennifer	4.50	70.76	318.42
Engineer Manager			
Pittman, Charles	18.00	157.01	2,826.18
Senior Engineer Manager			
Essary, Michael	77.50	178.18	13,808.95
Administrative Secretary			
McMurtrey, Jill	1.00	54.06	54.06
Assistant Engineer Manager			
Jones, Chris	9.00	158.66	1,427.94
Engineer Manager			
Granger, Brian	6.00	155.38	932.28
Totals	116.00		19,367.83
Total Labor			19,367.83

Reimbursable Expenses

Contract Labor			
		(Nathan Husman)	
Total Reimbursables	1.1 times		22,075.09

Total this Invoice \$41,442.92

105695.0015
2015-218-219
LR



RECEIVED
11-8-16

August 31, 2016
Project No: NS.12273.001
Invoice No: 1039866-07

City of Hattiesburg
Attn: Lamar Rutland, P.E.
P.O. Box 1898
Hattiesburg, MS 39403-1898

Project NS.12273.001 City of Hattiesburg – General Consulting – Task #7 – WWTP Process Selection
Professional Services from August 01, 2016 to August 31, 2016

Phase 007 Local Workforce Involvement Model Program

Consultants

Consultants/Subcontracts-Projects	(Community Resource Services)	38,730.00
Total Consultants	1.0 times	38,730.00

Total this Invoice \$38,730.00

105695.6015
2015-255
LR



City of Hattiesburg
2013 Sewer & Water Bond
Summary of Payments
As of November 15, 2016

Project Name	Payments by Project This Requisition	Payments to Date from This Bond
1500 GPM Water Well @ Plant No 1		514,891.83
18" Sewer Trunk Lines		1,462,533.86
Clear Sewer ROW & Easements		30,022.50
Comprehensive Sanitary Sewer Study Task 1		6,300.00
Construction of Drying Bed at North Lagoon		18,000.00
Hwy 98 Booster Station		43,522.75
Hwy 98 Elevated Water Tank		113,226.30
Hwy 98 Fire Lines		48,652.50
Inflow and Infiltration Study		4,096,939.46
James St Water Well # 3		629,887.99
No-Discharge Wastewater Treatment System		292,127.60
NS Task 10 South Lagoon Sampling		43,676.87
NS Task 7 Wastewater Treatment Phase A		3,272,829.24
NS Task 7 WWTP Phase B Final Design	38,730.00	2,767,719.81
NS Task 8 WWTP Access Road & Site Design2		265,151.26
NS Task 9 WWTP Land Application Mgt	41,442.92	264,961.84
Providence Sewer Repair		62,172.00
Sewer Improvements Ph I		123,469.75
Sewer Improvements Ph II		259,327.58
Sewer Improvements Ph III		504,373.26
Sewer Improvements Ph IV		2,690.00
Sewer Improvements Ph V		124,290.00
Sewer Improvements Ph VII		3,158,462.43
Sewer Rate Study 2016		41,802.20
Veteran's Blvd Water Connector		1,555,895.52
Water Improvements Ph I		115,051.65
Water Improvements Ph II		221,571.83
Water Improvements Ph III	59,539.53	1,655,931.29
Water Improvements Ph IV		132,482.50
Water Improvements Ph V		61,865.00
Water Line Old 98 & Runnels Rd		286,348.04
Water Rate Study 2016		53,054.40
Wesley Water Well # 2		26,840.00
WTP #2 Filter #6 Repairs		110,863.40
Grand Total	139,712.45	22,366,934.66

Hattiesburg, Mississippi does hereby certify to Hancock Bank, as trustee in respect to the referenced Bonds (the Trustee”):

- (1) The amounts herein requisitioned to be paid to the above-designated payees are for the items or services hereinabove described.
- (2) The items or services listed above for which payment is proposed to be made hereunder have not formed the basis for any payment heretofore made from the Project Fund Construction Account.
- (3) Each of the items was reasonable and necessary in connection with the “Construction Project” being financed pursuant to the Loan Agreement dated as of December 19, 2013 (the “Loan Agreement”).
- (4) The payment herein authorized and approved is a proper charge against the Project Fund Construction Account as provided for in Section 3 of the Loan Agreement.
- (5) The invoices or statements from the contractor, vendor or other payee or other document supporting the amounts requisitioned herein are on file with the City.

CITY OF HATTIESBURG, MISSISSIPPI

By: _____

Title: Mayor or City Clerk
(Authorized City Representative)



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-66

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Approve Acquisition and Relocation Policy for the

Title: Approve Acquisition and Relocation Policy for the South 28th Ave Bridge Replacement Project, and authorize Mayor to execute letter of Engagement authorizing Pittman, Howdeshell, Hinton & Hightower, PLLC, to perform legal services as required for said project.

Type: Resolution

Drafter: Marie Harris

In Control: City Council

Reference: Lamar Rutland

Attachments: Engagement Letter, Acquisition & Relocation Policy

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

PITTMAN LAW FIRM

A PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW

MILBRANCH OFFICE PARK
140 MAYFAIR ROAD, SUITE 700
HATTIESBURG, MISSISSIPPI 39402

JACK H. PITTMAN
CHRISTOPHER M. HOWDESHELL
JEFFREY L. HALL
BENJAMIN A. SNOW
ALEXANDRA P. SHOEMAKER

October 25, 2016

HOMER W. PITTMAN (1903-1971)

TELEPHONE: 601.264.3314
FACSIMILE: 601.261.3411

REPLY TO:
POST OFFICE, DRAWER 17138
HATTIESBURG, MS 39404-7138

Lamar Rutland, P.E.
Chief Engineer
City of Hattiesburg
Post Office Box 1898
Hattiesburg, MS 39403-1898

RE: Offer of Engagement
South 28th Avenue Bridge Replacement
Project Bridge #SA18-157

Dear Mr. Rutland:

Please consider this correspondence as our firm's offer to represent the City of Hattiesburg concerning the above-referenced project. It is my understanding that the project consists of approximately four (4) parcels, and that fee title must be acquired. We will make an initial determination of property affected and provide a full thirty-two (32) year title search on each parcel, coordinate the hiring of appraisers and otherwise provide all services required to ensure that the acquisition of the property necessary for this project conforms to the Uniform Relocation Assistance and Real Property Acquisition Policy's Act of 1970. This could include drafting resolutions for the City Council to adopt, drafting written Fair Market Value Offers to each of the affected landowners, and drafting conveyance documents. Additionally, and if necessary, we will file condemnation proceedings in the Court of competent jurisdiction in order to acquire title to the property through the judicial process.

For this work, and consistent with prior work done for the City, we will bill the City at the rate of One Hundred Fifty and No/100 Dollars (\$150.00) per hour, and will also charge for reimbursement of incidental expenses, such as copying costs, postage, recording fees, filing fees, court costs and similar items. Further, if we are requested subcontract with appraisers, relocation officers, or any other persons necessary to complete

Lamar Rutland, P.E.
Chief Engineer
City of Hattiesburg
October 25, 2016
Page Two

the project, the fees for such persons will be approved prior to their work, and billed through our firm. I have enclosed a proposed Acquisition and Relocation Policy concerning this project, and a proposed Resolution accepting this offer and adopting the Policy.

Please present the Policy and Resolution to the City Council for approval. If our attendance is necessary at any council meeting concerning the adoption of the Resolution, please advise. Once we receive notice to proceed, we will begin the title investigations and begin the search for an appraiser and review appraiser.

We appreciate the opportunity to provide these service for the City of Hattiesburg. If further information is required please let me know.

Respectfully,

PITTMAN LAW FIRM



Christopher M. Howdeshell

CMH:bws

Enclosures

ACQUISITION AND RELOCATION POLICY
SOUTH 28th AVENUE BRIDGE REPLACEMENT
PROJECT BRIDGE #SA18-157

The South 28th Avenue Bridge Replacement (Project Bridge #SA18-157) is part of an overall plan to improve infrastructure and allow for economic development in the City of Hattiesburg. Real property acquisition is necessary in order to accomplish the infrastructure goals of the City.

I. **PURPOSE and BACKGROUND**

This Acquisition policy is intended to establish procedures for acquiring real property by the City of Hattiesburg ("City") for projects funded in whole or part with public funds. This policy is intended to ensure that all acquisition is handled on a fair and equitable basis and in accordance with a uniform set of procedures.

All property to be acquired by the City for any purpose permitted under State Law will be acquired in accordance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended ("URA") and in accordance with the laws of the State of Mississippi.

The URA is triggered by the acquisition of real property, the displacement of persons, and has been expanded to include the acquisition of temporary easements as well. By virtue of this

project, the City does not intend to relocate or displace any person in association with the acquisition process; however, in the unlikely event of displacement, the City shall act in accordance with the relocation procedures set forth in the URA.

A description of the project area and a map of the area shall be on file in City Hall.

II. INVOLUNTARY or VOLUNTARY

The acquisition of real property may be made through voluntary or involuntary means. Under the URA an acquisition is generally considered involuntary when an agency acquires property under threat or use of eminent domain.

What makes a transaction "voluntary"?

- No specific site is needed and any of several properties could be acquired for project purposes.
- The property is not part of an intended, planned or designated project area where other properties will be acquired within specific time limits.
- The agency informs the owner in writing of the property's market value.

- The agency informs the owner in writing that the property will not be acquired through condemnation if negotiations do not reach an amicable agreement.

To determine if the proposed acquisition may be considered a "voluntary acquisition" under the URA, the City will refer to the URA regulations to ensure all applicable criteria and requirements for a voluntary acquisition found in 49 C.F.R. Part 24.101(b) (1) - (5).

III. INVOLUNTARY ACQUISITION

A. Notice To Owner

Following the adoption of the acquisition and relocation policy, the owner will be notified in writing of the City's interest in acquiring the property¹. This shall not apply to parcels upon which acquisition was begun prior to the adoption of this policy. This acquisition notice usually serves as an agency's initial written communication to an owner whose property may be acquired for a federally funded project under threat or use of eminent domain. The "Notice to Owner" will set forth minimum rights and protections afforded to property owners under the URA and will include a copy of the informational brochure, *"When A Public Agency Acquires Your Property"*.

¹ 49 C.F.R. §24.102(b)

B. Appraisal of Property

1. Appraisal - Before the initiation of negotiations, the property to be acquired shall be appraised, except where an appraisal is not required. An appraisal is not required if the owner is donating the property and releases the City from its obligation to appraise the property; or if the City determines that an appraisal is unnecessary because the valuation problem is uncomplicated and the anticipated value of the proposed acquisition is estimated at \$10,000 or less².
2. Waiver Valuations - If the City determines that an appraisal is unnecessary because the acquisition is uncomplicated and the anticipated value of the property is less than \$10,000, the City shall prepare a waiver valuation³, which should serve as the approved valuation. If any appraisal is requested by a landowner, the City may agree or decline such request.
3. Invitation To Owner - If the property is to be appraised the owner shall be provided an opportunity to accompany the Appraiser during the inspection of the property. When conducting a waiver valuation, the City is not

² 49 C.F.R. §24.102(c)(2)(i) and (ii)

³ 49 C.F.R. §24.102(c)(2)(ii)(A)

obligated to invite the property owner to accompany during the waiver valuation determination.

4. Review Appraisal - Unless the waiver valuation procedure is utilized, all appraisals of real property will be reviewed by a qualified Review Appraiser. The review appraiser shall certify in writing to the City his/her recommendation or approved value of the property. The certification will identify the appraisal report reviewed and explain the basis for such recommendation or approval. In the event that the Review Appraiser does not concur with the original appraisal, and the Appraiser and Review Appraiser can not agree on a value, the Review Appraiser may be asked to prepare a complete appraisal⁴.
5. Appraiser Qualifications - The City has reviewed the experience, education, training, certification/licensing, designation(s) and other qualifications of appraisers and review appraisers as set forth by the Mississippi Appraisal Board. Any appraiser or review appraiser involved in this project shall be at least a certified residential appraiser licensed according to the requirements of the Mississippi Appraisal Board, except when otherwise prohibited by the Uniform Standards of

⁴ 49 C.F.R. §24.104(b)(2) and §24.103

Appraisal Practice, and then, in such case, the appraiser or review appraiser shall be a certified general appraiser.

C. Establishment of Just Compensation

Before initiation of negotiations with the owner, the City will establish an amount it believes is just compensation for the real property to be acquired⁵. The amount established shall not be less than the approved appraisal of fair market value of the property or the Review Appraiser's recommended fair market value or the amount determined through the waiver valuation process.

D. Offer To Owner

The City shall make a written offer to the owner to acquire the property for the full amount believed to be just compensation. Along with the formal offer, the owner shall be given the following supporting documentation:

1. Summary Statement - Along with the initial written purchase offer, the owner shall be given a written statement of the basis for the offer of just compensation.

⁵ 49 C.F.R. §24.102(d)

- a. A statement of the amount offered as just compensation. In the case of a partial acquisition, the compensation for the real property to be acquired and the compensation for damages, if any, to the remaining real property shall be separately stated⁶.
- b. A description and/or location identification of the real property and the interest in the real property to be acquired⁷.
- c. An identification of the buildings, structures, and other improvements (including building equipment and trade fixtures), which are considered to be part of the real property for which the offer of just compensation is made. Where appropriate, the statement shall identify any separately held ownership interest in the property, e.g., a tenant-owned improvement, and indicate that such interest is not covered by the offer.

⁶ 49 C.F.R. §24.102(e)(1)

⁷ 49 C.F.R. §24.102(e)(2)

E. Basic Negotiation Procedures

The City will make reasonable efforts to contact the owner or the owner's representative and discuss its offer to purchase the property, including the basis for the offer of just compensation. Whenever feasible, personal face-to-face contact and discussion shall take place with the property owner. The City will explain the basic acquisition policies and procedures that apply including payment of incidental expenses. The owner will be given not less than ten (10) days to consider the offer and present material which the owner believes is relevant to determining the value of the property and to suggest modifications in the proposed terms and conditions of the purchase. The City shall consider any relevant information presented by the owner.

F. Updating Offer of Just Compensation

If the information presented by the owner or a material change in the character or condition of the property indicates the need for new appraisal information, or if a significant delay has occurred since the time of the appraisal(s) of the property, and it is possible that a material increase in the value of the property has occurred, the City will have the appraisal(s) updated or obtain a new appraisal(s). If the latest appraisal information indicates that a change in the proposed offer is warranted, the City will

promptly re-establish just compensation and offer that amount to the owner in writing⁸.

G. Acceptance/Rejection

If the landowner accepts the value presented by the City as just compensation, the City may close on the acquisition transaction. If, however, the land owner and the City are unable to reach an agreement as to the value of the purchase price, administrative settlements may be used as a means to "encourage and expedite acquisition by agreement⁹." If the property owner is unwilling to sell his property at a fair value, the City may have to exercise its eminent domain power through condemnation and allow a Court to determine just compensation for the property.

H. Administrative Settlements

Administrative settlements may be considered when reasonable efforts to negotiate an agreement at the amount offered have failed and a settlement would be deemed reasonable, prudent, and in the public interest. As a result, the purchase price for the property may exceed the amount originally offered as just compensation. A written justification explaining the basis for the settlement shall be included in the City's files.

⁸ 49 C.F.R. §24.102(g)

⁹ 49 C.F.R. §24.102

I. Condemnation

If the property owner is unwilling to sell his property at a fair value, the City may have to exercise its eminent domain power through condemnation and allow a Court to determine just compensation for the property.

J. Payment Before Taking Possession

Before requiring the owner to surrender possession of the real property, the City will pay the agreed purchase price to the owner, or in the case of condemnation, deposit with the Court, for the benefit of the owner, an amount not less than the just compensation as determined by the City or the Court award of compensation in the condemnation proceeding for the property¹⁰.

K. Coercive Action

The City shall not advance the time of condemnation, defer negotiations or condemnation or the depositing of funds with the Court, or take any other coercive action in order to induce an agreement on the price to be paid for the property¹¹.

L. Quick-Take Powers

Where authorized by State law, the City may exercise its quick-take powers.

¹⁰ 49 C.F.R. §24.102(j)

¹¹ 49 C.F.R. §24.102(h)

M. Uneconomic Remnant

If the acquisition of only a portion of a property would leave the owner with an uneconomic remnant, the City shall offer to acquire the uneconomic remnant along with the portion of the property needed for the project. For purposes of this requirement, the term "uneconomic remnant" means a parcel of real property in which the owner is left with an interest after the partial acquisition of the owner's property, which has little or no value or utility to the owner, as determined by the City¹².

N. Inverse Condemnation

If the City intends to acquire any interest in real property by exercise of the power of eminent domain, it shall institute formal condemnation proceedings and not intentionally make it necessary for the owner to institute legal proceedings to prove the fact of the taking of the real property¹³. When property is taken without payment of just compensation the result is inverse condemnation.

O. Incidental Expenses

The property owner shall be reimbursed for all reasonable expenses allowed under 49 C.F.R. § 24.106 he necessarily incurs during the acquisition process¹⁴. Whenever feasible, the City shall pay these costs directly to the billing agent so that the owner will not have

¹² 49 C.F.R. §24.102(k)

¹³ 49 C.F.R. §24.102(l)

¹⁴ 49 C.F.R. §24.106(a)

to pay such costs and then seek reimbursement from the City¹⁵. The City is not required to pay costs solely required to perfect the owner's title¹⁶.

P. Certain Litigation Expenses

The owner of the real property shall be reimbursed for any reasonable expenses, including reasonable attorney, appraisal, and engineering fees, which the owner actually incurred because of condemnation proceedings if:

1. The final judgment of the Court is that the City cannot acquire the property by condemnation¹⁷; or
2. The condemnation proceeding is abandoned by the City other than under an agreed upon settlement¹⁸; or
3. The Court having jurisdiction renders a judgment in favor of the owner in an inverse condemnation proceeding or the City effects a settlement of such proceedings¹⁹.

¹⁵ 49 C.F.R. §24.106(a)(3)(b)

¹⁶ 49 C.F.R. §24.106(a)(1)

¹⁷ 49 C.F.R. §24.107(a)

¹⁸ 49 C.F.R. §24.107(b)

¹⁹ 49 C.F.R. §24.107(c)

Q. Donations

An owner whose real property is being acquired may, after being fully informed by the City of the right to receive just compensation for such property, donate all or any part thereof, any interest therein, or any compensation paid therefore, to the City as such owner shall determine²⁰. The City is responsible for ensuring that an appraisal of the real property is obtained unless the owner releases the Authority from such obligation.

R. Property Owner With Conflict of Interest

1. Policy - A conflict of interest exists whenever the owner of an interest in real property that is to be acquired by the City serves as an official or agent of the City or exercises any other responsible function in connection with the project involving the acquisition. The City has established safeguards to prohibit employees, officials, or agents from using their positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.

²⁰ 49 C.F.R. §24.108

2. Safeguards - The City has established the following safeguards to prevent the possibility of undue personal enrichment by owners who may be in a conflict of interest position:
 - a. Disclosure - the City will require disclosure of any potential conflict of interest in writing to the City's governing body and to the City's legal counsel.
 - b. Price concurrence - The City may request an independent agency or person to review the appraisal and the determination of just compensation and concur in the proposed and final acquisition prices.
 - c. Condemnation - The City may acquire the property through condemnation and let the Court determine just compensation for the property. This is especially appropriate if the owner is unwilling to sell his or her property for its appraised market value.

3. Appraisals

- a. The Appraiser, Review Appraiser or person performing the waiver valuation shall not have any interest, direct or indirect, in the real property being valued for the Authority.
- b. Compensation for making an appraisal or waiver valuation shall not be based on the amount of the valuation estimate.
- c. No person shall attempt to unduly influence or coerce an Appraiser, Review Appraiser, or waiver valuation preparer regarding any valuation or other aspect of an appraisal, review or waiver valuation. Persons functioning as negotiators may not supervise or formally evaluate the performance of any Appraiser or Review Appraiser performing appraisal or appraisal review work, except that, for a program or project receiving Federal financial assistance, the Federal funding Agency may waive this requirement if it determines it would create a hardship for the Authority.

Conflicts With State Law

If this policy in any way conflicts with State Law, State Law will prevail.



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-68

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: 1500 GPM Wesley Well No. 2-Construction Contract

Title: Approve and Authorize Mayor to execute contract between the City of Hattiesburg and Thompson Brothers Drilling in the amount of \$ 459,000.00 for construction services related to the 1500 GPM Wesley Well No. 2 Project.

Type: Action Item

Drafter: Marie Harris

In Control: City Council

Reference: Lamar
Rutland

Attachments: 1500 GPM Well 2 Contract, Revised - 1500 GPM Well 2 Contract

File
Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication
Information:

History of Legislative File

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

1500 GPM WESLEY WELL No. 2

FOR THE

**CITY OF HATTIESBURG
LAMAR COUNTY
MISSISSIPPI**



SEPTEMBER 2016



PREPARED BY:

**SHOWS, DEARMAN & WAITS, INC.
CONSULTING ENGINEERS
301 SECOND AVENUE
HATTIESBURG, MISSISSIPPI
(601) 544-1821**

INDEX

ADVERTISEMENTS FOR BIDS.....	1
INFORMATION FOR BIDDERS.....	2-4
PROPOSAL FORM.....	5-6
BID BOND.....	7-8
CONTRACT AGREEMENT.....	9-11
PAYMENT & PERFORMANCE BOND.....	12-13
NOTICE OF AWARD.....	14
NOTICE TO PROCEED.....	15
GENERAL CONDITIONS.....	16-53
SUPPLEMENTAL GENERAL CONDITIONS.....	54
SPECIAL CONDITIONS.....	54-55
MEASUREMET AND PAYMENT.....	56-57
CLOSE-OUT DOCUMENTS.....	58-59
TECHNICAL SPECIFICATIONS:	
Water Supply.....	60-70
Ductile Iron Water Systems.....	71-86
New Well Controls.....	87-110
Excavation, Trenching and Backfilling.....	111-116



ADVERTISEMENT FOR BIDS

NOTICE is hereby given that the City Clerk of the City of Hattiesburg, Mississippi, will receive sealed bids until 10:00 a.m. on October 13, 2016 in the City Clerk's Office in the City Hall at 200 Forrest Street of said City for furnishing the City's requirements for the following:

1500 GPM WESLEY WELL No. 2 HATTIESBURG, MISSISSIPPI

Plans, Specifications and proposal forms may be obtained from Shows, Dearman & Waits, Inc., 301 Second Avenue, Hattiesburg, Mississippi, 39401, upon deposit of \$100.00, non-refundable. All bids must be accompanied by bid security equal to 5% of the amount of the bid, in the form of a certified check, cashier's check or a bid bond written by a company properly licensed in Mississippi.

Each BID must be received in a sealed envelope which is marked in the lower left-hand corner EXACTLY as follows:

BID:

1500 GPM WESLEY WELL No. 2 HATTIESBURG, MISSISSIPPI

No bid may be withdrawn for a period of sixty (60) days. The lowest and best proposal received will be accepted, subject to the provisions of Section 31-7-13 of the Mississippi Code of 1972, Annotated and Amended, and other applicable State law; but the Council reserves the right to reject any or all proposals received and to waive informalities.

PUBLISHED by Order of the Council on the 6th day of September A.D., 2016.

CITY OF HATTIESBURG, MISSISSIPPI

BY: _____
Kermas Eaton, City Clerk

Publish on September 8, 2016 and September 15, 2016
City of Hattiesburg
Return PROOF to City Clerk's Office
PO Box 1898
Hattiesburg, MS 39403-1898

INFORMATION FOR BIDDERS

BIDS will be received by the CITY OF HATTIESBURG, MISSISSIPPI herein called the "OWNER", at City Hall until 10:00 a.m. on October 13, 2016, and then at said office publicly opened and read aloud.

Each BID must be submitted in sealed envelope, addressed to City of Hattiesburg. Each sealed envelope containing a BID must be plainly marked on the outside as BID for 1500 GPM WESLEY WELL No. 2 and the envelope should bear on the outside the BIDDER'S name, address, and license number if applicable, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed addressed to the Owner at P. O. Box 1898, Hattiesburg, MS 39403

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 60 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID BOND payable to the OWNER for five percent (5%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsive, responsible BIDDERS. When the Agreement is executed the BONDS of the two remaining

unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the PAYMENT BOND and PERFORMANCE BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A PERFORMANCE BOND and a PAYMENT BOND, each in the amount of 100 percent (100%) of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or PAYMENT BONDS and PERFORMANCE BONDS must file with each BOND a certified and effective dated copy of their Power of Attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the PERFORMANCE BOND and PAYMENT BOND within ten (10) calendar days from the date when NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable PERFORMANCE BOND, PAYMENT BOND and Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw the signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period; the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsible BIDDER.

All applicable Laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

FURTHER, the BIDDER agrees to abide by the requirements under Executive Order No. 11246, as amended, including specifically the provisions of the equal opportunity clause set forth in the SUPPLEMENTAL GENERAL CONDITIONS.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when required to do so by the OWNER.

The ENGINEER is SHOWS, DEARMAN & WAITS, INC. The address of the ENGINEER is 301 2nd Avenue, Hattiesburg, MS 39401.

PROPOSAL FORM

I (we) agree to begin work within (10) calendar days after the issuance of Work Order, and to complete the work within 180 calendar days thereafter.

The undersigned further agrees that the unit bid price quoted includes all items of work required or necessary for the accomplishment of the projected work.

BIDDERS agree to perform all the work described in the CONTRACT DOCUMENTS for the following unit bid prices:

BID: 1500 GPM WESLEY WELL No. 2 CITY OF HATTIESBURG					
Item No.	Item	Quantity	Unit	Price	Amount
1	TEST HOLE - 850 L.F. Deep	1	L.S.	\$155,000.00	\$155,000.00
2	16"X12" 1500 GPM WATER WELL - 820 L.F. Deep	1	L.S.	\$195,383.00	\$195,383.00
2A	ADD TO ITEM No. 2 PER FOOT OF COMPLETED WELL BELOW 820 L.F.	0	L.F.	\$400.00	\$0.00
2B	DEDUCT FROM ITEM No. 2 PER FOOT OF COMPLETED WELL ABOVE 820 L.F.	0	L.F.	\$200.00	\$0.00
3	12" MASTER WATER METER	1	L.S.	\$3,200.00	\$3,200.00
4	YARD PIPING - 12" DUCTILE IRON	1	L.S.	\$38,740.00	\$38,740.00
5	CHAIN-LINK FENCE/GATES	440	L.F.	\$15.40	\$6,776.00
6	ELECTRICAL WORK	1	L.S.	\$26,950.00	\$26,950.00
7	WELL CONTROLS	1	L.S.	\$30,951.00	\$30,951.00
8	EROSION CONTROL	1	L.S.	\$1,000.00	\$1,000.00
9	GRASSING	1	L.S.	\$1,000.00	\$1,000.00
				TOTAL BID	\$459,000.00

The undersigned certifies that the bid prices contained herein have been carefully checked and is submitted as correct and final.

If within thirty (30) days of the scheduled closing time for receipt of bids, this Proposal is accepted, the undersigned will execute a formal contract within seven (10) days after official notification thereof, will deliver a surety bond for the faithful performance of this contract, and will complete the work within the time specified from the date of execution of the contract.

Respectfully Submitted,

Thompson Brothers Drilling, Inc.

Name of Bidder

By:

538 Moselle Seminary Road

Address

Moselle, MS 39459

City, State

BID BOND

KNOW ALL MEN BY THESE PRESENTS: that we, the under signed, Thompson Brothers
Drilling, Inc. Principal, and SureTec Insurance Company as Surety, are hereby
held and firmly bound unto City of Hattiesburg as Owner in the penal sum of
for payment of which, well and truly to be made, we hereby jointly and severally bind
ourselves, successors and assigns.

Signed, this 13th day of October, 2016.

The Condition of the above obligation is such that whereas the Principal has submitted to
a certain BID, attached hereto and hereby made a part hereof to enter into a contract in
writing, for the following project:

1500 GPM WESLEY WELL No. 2
HATTIESBURG, MISSISSIPPI

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in
the Form of Contract attached hereto (properly completed in accordance with said BID)
and shall furnish a BOND for his faithful performance of said contract, and for the
payment of all persons performing labor or furnishing materials in connection therewith,
and shall in all other respects perform the agreement created by the acceptance of said
BID, then this obligation shall be void, otherwise the same shall remain in force and effect;
it being expressly understood and agreed that the liability of the Surety for any and all
claims hereunder shall, in no event, exceed the penal amount of this obligation as herein
stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said
Surety and its BOND shall be in no way impaired or affected by any extension of the time
within which the OWNER may accept such BID; and said Surety does hereby waive notice
of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and
seals, and such of them as are corporations have caused their corporate seals to be hereto
affixed and these presents to be signed by their proper officers, the day and year set forth
above.

Thompson Brothers Drilling, Inc

J.P. Thompson (L.S.)
PRINCIPAL

SureTec Insurance Company

SURETY

BY:

Ford Mosby, Attorney-in-Fact

IMPORTANT: Surety companies executing BONDS must appear on the Treasure Department's most current line (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Amy W. Smith, David W. Carlisle, Delores W. Nokes, Dudley D. Wooley, G. Ford Mosby, James Riley Winchester,
Joey H. Hutto, George Bailey Menetre, Michael Addison, Blake J. Martinez

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Three Million and 00/100 Dollars (\$3,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment shall continue in force until 5/18/2017 and is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of July, A.D. 2015

SURETEC INSURANCE COMPANY

By: _____

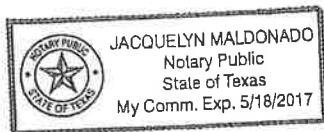
John Knox Jr., President

State of Texas
County of Harris

SS: _____



On this 21st day of July, A.D. 2015 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 13th day of October, 2015, A.D.

M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.

**ADDENDUM No. 1
to the
CONTRACT DOCUMENTS and SPECIFICATIONS
for the
1500 GPM WESLEY WELL No. 2**

CITY of HATTIESBURG

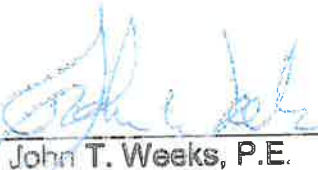
The following attached modifications are to be made to the specifications and contract documents for the above captioned project:

- CHANGE No. 1 -** The lap pipe shall be stainless steel as noted on page 4 of the plan documents.
- CHANGE No. 2-** All materials for the project shall be a product of the U.S.A.

SHOWS, DEARMAN & WAITS, INC.

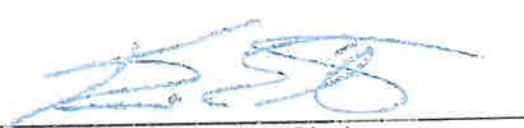
CITY OF HATTIESBURG

by:


John T. Weeks, P.E.



by:


Kermas Eaton, City Clerk

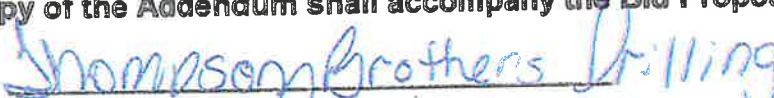
Dated this 6th day of October, 2016

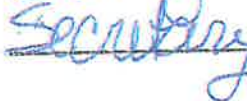
The receipt of this Addendum shall be indicated by signature on the line below.
A signed copy of the Addendum shall accompany the Bid Proposal.

Contractor:

Signature:

Title:





CONTRACT AGREEMENT

THIS AGREEMENT made and entered into this ____ day of _____, 20____ by and between _____ hereinafter called the CONTRACTOR, CITY OF HATTIESBURG hereinafter called the OWNER, Witnesseth that the Contractor and the OWNER, for the consideration hereafter named and agrees as follows.

ARTICLE 1: SCOPE OF WORK

The Contractor agrees to furnish all tools, labor, equipment, materials, and supplies required to be furnished, and perform all work required under and in accordance with the plans entitled:

1500 GPM WESLEY WELL No. 2

which are on file at the office of the OWNER, and the Specifications, Proposals, General and Special Conditions, attached hereto and made a part hereof as fully as though copied herein, under the direct supervision and to the entire satisfaction of the OWNER and in accordance with the Laws of the State of Mississippi.

ARTICLE 2: THE CONTRACT SUM

It is further agreed and understood by and between the parties hereunto that the OWNER agrees to pay and the Contractor agrees to accept full and final compensation for all work done under this agreement, the lump sum amount adjusted for variation of quantities at the unit prices named in the Proposal, which is hereto attached, such payment to be made in lawful money of the United States, at the time and in the manner hereinafter set forth.

ARTICLE 3: TIME OF COMPLETION

The Contractor agrees, for the consideration above expressed, to begin and complete the work within the time specified in the Proposal. If the Contractor fails to complete the work in the time specified, he shall pay the OWNER as **LIQUIDATED DAMAGES**, ascertained and agreed, and not in the nature of a penalty, the sum of **\$ 800.00** for each day delayed, which shall be deducted from the final amount to be paid under the contract; provided that the extension of time with the waiver of liquidation damages may be granted as provided for in the Specifications.

ARTICLE 4: PROGRESS PAYMENTS

The owner agrees to make progress payments during the construction as provided herein as follows:

The ENGINEER will on or before the tenth (10th) day of each month make an estimate of the value of the work done, based on contract prices.

The OWNER agrees to pay the CONTRACTOR 100% of the value of the work done each month, less five percent (5%) RETAINAGE until final acceptance of the work has been made).

ARTICLE 5: ACCEPTANCE AND FINAL PAYMENT

Upon receipt of written notice that the work is ready for final acceptance and inspection, the Engineer shall promptly make such inspection, and when he finds the work acceptable under the contract, and the contract fully performed, he shall promptly issue a final certificate, over his own signature, stating that the work provided for in this Contract has been completed and is accepted by him under the terms and conditions thereof. Then, the entire balance shall be due the Contractor within sixty (60) days of the date of said final acceptance.

Before issuance of final certificate, the Contractor shall submit evidence satisfactory to the ENGINEER that all payrolls, materials, bills, and other indebtedness connected with the work have been paid.

The making and acceptance of the final payment shall constitute a waiver of all claims by the OWNER, other than those arising from unsettled liens, from faulty work or materials appearing within one (1) year after payment, or claims previously made and still unsettled.

If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and the Engineer, so certifies, the OWNER shall, upon certificate of the Engineer and without terminating the Contract, make payment of the balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

ARTICLE 6: THE PERFORMANCE BOND

The Contractor agrees to furnish a bond, with an approved surety thereon guaranteeing the performance of this contract, in no less than one hundred percent (100%) of the amount of the Contract. Said Bond shall be conditioned on full and complete performance of the Contract, and for the payment of all labor and materials for a period of one (1) year after completion. The Surety on said Bond shall be a surety company of financial resources satisfactory to the OWNER and authorized to do business in the State of Mississippi.

ARTICLE 7: INSURANCE

The Contractor agrees to also carry Public Liability Insurance, Property Damage Insurance, and Workman's Compensation Insurance in amounts as required by the Specifications.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first written above.

OWNERS:

SEAL

City of Hattiesburg

BY

Title

ATTEST

CONTRACTOR:

SEAL

BY

Title

ATTEST

PAYMENT AND PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: THAT WE, the Undersigned (hereinafter called the Principal), a corporation, partnership or individual duly unauthorized by law to do business as a construction contractor in the State of Mississippi, and _____ of (herein called the Surety), a corporation duly authorized to do a surety business under the laws of the State of Mississippi, are held and firmly bound unto City of Hattiesburg, (hereinafter called the Obligee), a Municipality existing under the laws of the State of Mississippi, in the penal sum of Dollars (_____) lawful money of the United States, for the payment of which well and truly to be made, the said Principal and the said Surety do hereby bind ourselves, our heirs, executors, administrators and assigns, jointly and severally, by these presents, as follows:

The Condition of this obligation is such that; whereas Principal by an instrument In writing attached here-to and bearing date of _____ has agreed with said Obligee to do all work necessary and to furnish labor, materials, tools, supplies and services to construct **1500 GPM WESLEY WELL No. 2** as shown on Plans and specified thereby in the Specifications, Proposal and other Contract Documents hereto attached.

NOW THEREFORE, if said Principal shall well and truly in good, sufficient and workmanlike manner, and to the satisfaction of Obligee perform and complete the work required, and shall defend, indemnify and save harmless said Obligee against all damages, claims, demands, expense and charge of every kind (including claims of patent infringement) arising out of injury or damage to persons or property by reason or arising from any act, omission or neglect of said Principal, his agent, servants or employees with relation to said work; and shall pay all cost, charges, rentals and expenses for labor, material, supplies and equipment and deliver the said improvement to Obligee completed and ready for occupancy or operation, and free from all liens, encumbrances or claims for labor, material or otherwise; and shall pay all other expenses lawfully chargeable to Obligee by reason of any default or neglect of the said Principal in the relation of said agreement and said work, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said surety for value received hereby stipulates and agrees that no charge, extension of time, alteration or addition to the terms of the Contract, or the work to be performed hereunder, or the Specifications accompanying the same, shall in any way affect its obligation on this bond and does hereby waive notice of any change, extension of time, alteration or addition to the terms of the Contract, or to the work, or to the Specifications.

PROVIDED FURTHER, that if Principal, his or its subcontractor or subcontractors fail to duly pay for any labor, materials, team hire, sustenance provisions or any other

supplies or materials used or consumed by such Principal or his, their or its subcontractors in performance of the work contracted to be done, the Surety will pay the same in any amount not exceeding the sum specified in the bond, together with interest as provided by law.

IN WITNESS THEREOF: Said Principal and surety have hereunto set their hands and seals at _____ this _____ day of _____, 20__.

(SEAL)

WITNESSES:

PRINCIPAL

ADDRESS

Name of person executing for Principal

TITLE

SURETY

ADDRESS

WITNESSES:

Name of person executing for Surety

TITLE

NOTICE OF AWARD

TO: _____

Project: **1500 GPM WESLEY WELL No. 2**

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated _____, 20____, and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND, and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 20_____.

CITY OF HATTIESBURG
OWNER

BY: _____

TITLE: Mayor

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by
This the _____ day of _____, 20____.
Title: _____

Name: _____

NOTICE TO PROCEED

TO: _____

DATE: _____

Project: 1500 GPM WESLEY WELL No. 2

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20__ on or before _____, 20__, and you are to complete the WORK within 180 consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20__.

CITY OF HATTIESBURG
OWNER

BY: _____

TITLE: Mayor

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____ This the ____ day of _____, 20__.

Title:

Name: _____

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms shall have the meaning indicated which shall be applicable to both the singular and plural thereof.

ACCEPTANCE: By the OWNER of the Work as being fully complete in accordance with the Contract Documents.

AGREEMENT: The written agreement between the OWNER and the CONTRACTOR covering the Work to be performed: the Contract Documents are attached to and made a part of the Agreement. Also designated as the Contract.

ADDENDA: Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings and Specifications, by addition, deletions, clarifications or corrections.

APPLICATION FOR PAYMENT: The form furnished by the ENGINEER which is to be used by the CONTRACTOR in requesting progress payments and an affidavit of the CONTRACTOR that progress payments theretofore received from the OWNER on account of the WORK have been applied by the CONTRACTOR to discharge in full all of the CONTRACTOR'S obligations stated in prior Applications for Payment.

APPROVAL: Accept as satisfactory.

BID: The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

BIDDER: Any person, firm or corporation submitting a Bid for the Work.

BONDS: Bid, performance and payment bonds and other instruments of security furnished by the CONTRACTOR and his surety in accordance with the Contract Documents and in accordance with the law of the place of the project.

CHANGE ORDER: A written order to the CONTRACTOR signed by the OWNER authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

CONTRACT DOCUMENTS: The Agreement, Addenda, Instruction's to Bidders, CONTRACTOR'S BID, the Bonds, the Notice of Award, these General Conditions, the Supplementary conditions, Special Conditions, Technical Conditions, the Specifications,

Drawings and Modifications, and Notice to Proceed.

CONTRACT PRICE: The total moneys payable to the CONTRACTOR under the Contract Documents.

CONTRACT TIME: The number of calendar days stated in the Agreement for the completion of the Work.

CONTRACTING OFFICER: The owner (Grantee) - The individual who is authorized to sign the contract documents on behalf of the owner's governing body.

CONTRACTOR: The person, firm or corporation with whom the OWNER has executed the Agreement.

DAY: A calendar day of twenty-four hours measured from midnight to the next midnight.

DRAWINGS: The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by the ENGINEER and are referred to in the Contract Documents.

ENGINEER: The person, firm or corporation named as such in the Contract Documents.

FIELD ORDER: A written order issued by the ENGINEER which clarifies or interprets the Contract Documents in accordance with Paragraph 9.3 or orders minor changes in the Work in accordance with paragraph 10.2.

MODIFICATION: (a) A written amendment of the Contract Documents signed by both parties, (b) a Change Order (c) a written clarification or interpretation issued by the ENGINEER in accordance with paragraph 9.3 or (d) a written order for a minor change or alteration in the Work issued by the ENGINEER pursuant to paragraph 10.2. A modification may only be issued after execution of the Agreement.

NOTICE OF AWARD: The written notice by OWNER to the apparent successful Bidder stating that upon compliance with the conditions precedent to be fulfilled by him within the time specified, OWNER will execute and deliver the Agreement to him.

NOTICE TO PROCEED: A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform his obligations under the Contract Documents.

OWNER: A public body or authority, corporation, association, partnership, or individual

for whom the Work is to be performed.

PROJECT: The entire construction to be performed as provided in the Contract Documents.

CONSTRUCTION OBSERVER

RESIDENT INSPECTOR

CONSTRUCTION INSPECTOR

PROJECT REPRESENTATIVE: An authorized representative of the ENGINEER assigned to observe the Work performed and materials furnished by the CONTRACTOR or such other person as may be appointed by the OWNER as his representative. The CONTRACTOR shall be notified in writing of the identity of this representative.

SHOP DRAWINGS: All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a Subcontractor, manufacturer, supplier or distributor and which illustrate the equipment, material or some portion of the Work and as required by the Contract Documents.

SAMPLES: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

SPECIFICATIONS: Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work.

SUBCONTRACTOR: An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

SUBSTANTIAL COMPLETION: The stage in construction when a project can be utilized for the purposes for which it was intended. At substantial completion, minor items and items that are seasonally restricted need not be completed, but the items that affect operational integrity and function of the facility must be capable of continuous use.

SUPPLEMENTARY GENERAL CONDITIONS: Federal Conditions in effect at time of submission of Bid.

SUPPLIER: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

SPECIAL CONDITIONS: When included as a part of the Contract Documents, Special Conditions refer only to the Work under this Contract.

SURETY: The corporate body which is bound with the CONTRACTOR and which engages to be responsible for the CONTRACTOR and his acceptable performance of the Work.

WORK: Any and all obligations, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by CONTRACTOR under the Contract Documents, including all labor, materials, equipment and other incidentals, and the furnishing thereof.

WRITTEN NOTICE: The term "Notice" as used herein shall mean and include all written notices, demands, instructions, claims, approvals, and disapprovals required to obtain compliance with Contract requirements. Written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or to an authorized representative of such individual, firm or corporation, or if delivered at or sent by registered mail to the last business address known to him who gives the notice. Unless otherwise stated in writing, any notice to or demand upon the OWNER under this Contract shall be delivered to the OWNER through the ENGINEER.

ARTICLE 2 - PRELIMINARY MATTERS:

AWARD:

2.1 The award of the Contract, if it is awarded, will be to the lowest responsible, responsive Bidder. No Notice of Award will be given until the OWNER has concluded such investigations as he deems necessary to establish the responsibility, qualifications, and financial ability of the Bidders to do the Work in accordance with the Contract Documents to the satisfaction of the OWNER within the time prescribed. The OWNER reserves the right to reject the BID of any Bidder who does not pass such investigation to the OWNER'S satisfaction. In analyzing Bids, the OWNER may take into consideration alternates and unit prices, if requested by the Bid Form. If the Contract is awarded, the OWNER will issue the NOTICE of AWARD and give the successful Bidder a contract for execution within sixty (60) days after the opening of Bids.

EXECUTION OF AGREEMENT:

2.2 At least three counterparts of the Agreement and such other Contract Documents will be executed and delivered by CONTRACTOR to the OWNER within 10 working days or 15 calendar days of receipt from the OWNER.

FORFEITURE OF BID SECURITY:

2.3 Failure of the successful Bidder to execute and deliver the Agreement and deliver the required Bonds as stipulated in paragraph 2.2 shall be just cause for the OWNER to annul the Notice of Award and declare the Bid and any security therefore forfeited.

CONTRACTOR'S PRE-START REPRESENTATIONS:

2.4 CONTRACTOR represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with, the nature and extent of the Contract Documents, Work, Locality, and local conditions and will obey all federal, state, and local laws, ordinances, rules and regulations that may in any manner affect performance of the Work, and represents that he has correlated his study and observations with the requirements of the Contract Documents. CONTRACTOR also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Specifications and made such additional surveys and investigations as he deems necessary for the performance of the Work at the Contract Price in accordance with the requirements of the Contract Documents and that he has correlated the results of all such data with the requirements of the Contract Documents.

COMMENCEMENT OF CONTRACT TIME:

2.5 The Contract Time will commence to run no less than the 15 days after receipt by the CONTRACTOR of the Notice to Proceed.

STARTING THE PROJECT:

2.6 CONTRACTOR shall start to perform his obligations under the Contract Documents on the date when the Contract Time commences to run. No Work shall be done at the site prior to the date on which the Contract Time commences to run, except with the written consent of the OWNER.

BEFORE STARTING CONSTRUCTION:

2.7 Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. He shall at once report in writing to ENGINEER any conflict, error or discrepancy which he may discover; however, he shall not be liable to OWNER or ENGINEER for his failure to discover any conflict, error or discrepancy in the Drawings or Specifications.

SCHEDULE OF COMPLETION:

2.8 Within ten (10) days after delivery of the Notice to Proceed by OWNER to CONTRACTOR, CONTRACTOR shall submit to ENGINEER an estimated progress schedule with earnings indicating the starting and completion dates of the various stages

of the Work, and a preliminary schedule of Shop Drawing submissions. See paragraphs 6.22 through 6.26. The ENGINEER shall review and return this schedule or require revisions thereto within 14 days of its submittal. If there is more than one CONTRACTOR involved in a project, the responsibility for coordinating the Work of all CONTRACTORS shall be as provided in the Special Conditions.

2.9 Within twenty (20) days after delivery of the executed agreement by OWNER to CONTRACTOR, but before starting the Work at the site, a preconstruction conference will be held to review the above schedules, to establish procedures for handling shop drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the project. Present at the conference will be the OWNER or his representative, ENGINEER, Resident Project Representatives, CONTRACTOR and his Superintendent.

QUALIFICATION OF SUBCONTRACTORS MATERIALMEN AND SUPPLIERS:

2.10 Within ten (10) working days after bid opening, the CONTRACTOR will (if required) submit to the OWNER and the ENGINEER for acceptance a list of the names of Subcontractors and such other persons and organizations (including those who are to furnish principal items of material or equipment) proposed for those portions of the Work as to which the identity of the Subcontractors and other person and organizations must be submitted as specified in the Contract Documents. Within thirty (30) working days after receiving the list, the ENGINEER will notify the CONTRACTOR in writing if either the OWNER or the ENGINEER, after due investigation, has reasonable objection to any Subcontractor, person or organization on such list. The failure of the OWNER or the ENGINEER to make objection to any Subcontractor, person or organization on the list within thirty days of receipt shall constitute an acceptance of such Subcontractor, person or organization. Acceptance of any such Subcontractor, person or organization shall not constitute a waiver of any right of the OWNER or the ENGINEER to reject defective Work, material or equipment, or Work, material or equipment not in conformance with the requirements of the Contract Documents.

ARTICLE 3 - CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS:

3.1 It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between the OWNER and the CONTRACTOR. They may be altered only by a Modification.

3.2 The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, he shall call it to the ENGINEER'S attention in writing at once and before proceeding with the Work affected thereby; however, he shall not be liable to OWNER or

ENGINEER for his failure to discover any conflict, error or discrepancy in the Specifications or Drawings. The various Contract Documents shall be given precedence, in case of conflict, error or discrepancy, as follows: Agreement Modifications, Addenda, Special Conditions, and Instruction's to Bidders, General Conditions, Technical Specifications and Drawings.

3.3 The words "furnish", "furnish and install", "install", and "provide" or words with similar meaning shall be interpreted, unless otherwise specifically stated, to mean "furnish and install complete in place and ready for service."

3.4 Miscellaneous items and accessories which are not specifically mentioned, but which are essential to produce a complete and properly operating installation, or usable structure or plant providing the indicated function, shall be furnished and installed without change in the Contract Price. Such miscellaneous items and accessories shall be of the same quality standards including material, style, finish, strength, class, weight and other applicable characteristics, as specified for the major component of which the miscellaneous item or accessory is an essential part, and shall be approved by the ENGINEER before installation. The above requirement is not intended to include major components not covered by or inferable from the Drawings and Specifications.

3.5 The Work of all trades under this Contract shall be coordinated by the CONTRACTOR in such a manner as to obtain the best workmanship possible for the entire Project, and all components of Work shall be installed or erected in accordance with the best practices of the particular trade.

3.6 Manufacturer's literature, when referenced, shall be dated and numbered and is intended to establish the minimum requirements acceptable. Whenever reference is given to codes or standard specifications or other data published by regulating agencies or accepted organizations, including but not limited to National Electrical Code, applicable State Building Code, Federal Specifications, ASTM Specifications, various institute specifications, and the like, it shall be understood that such reference is to the latest edition including addenda in effect on the date of Bid.

3.7 Brand names where used in the Technical Specifications, are intended to denote the standard of quality required for the particular material or product. The use of a brand name item is to set a standard of quality and is not intended to restrict the Contractor from offering an equal item from other source(s) of supply. The term "equal" or "equivalent" when used in connection with brand names, shall be interpreted to mean a material or product that is similar and equal in type, quality, size, capacity, composition, finish, color and other applicable characteristics to the material or product specified by trade name, and that is for the same use and capable of performing the same function, in the opinion of the ENGINEER, as the material or product so specified. Proposed equivalent items must be approved by ENGINEER before they are purchased or incorporated in the Work.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE CONDITIONS; REFERENCE POINTS:

Availability of Lands

4.1 The OWNER will furnish, as indicated in Contract Documents the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise specified in the Contract Documents. Other access to such lands or rights-of-way for the CONTRACTOR'S convenience shall be the responsibility of the CONTRACTOR. The CONTRACTOR will provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 The OWNER will, upon request, furnish to the BIDDERS copies of all available boundary surveys.

Subsurface Conditions:

4.3 The CONTRACTOR acknowledges that he has investigated prior to bidding and satisfied himself as to the conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, tides, water tables or similar physical conditions at the site, the conformation and conditions of the grounds, the character of equipment and facilities needed preliminary to and during prosecution of the Work. The CONTRACTOR further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done on behalf of the OWNER on the site or any contiguous site, as well as from information presented by the Drawings and Specifications made a part of this Contract, or any other information made available to him prior to receipt of Bids. Any failure by the CONTRACTOR to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work. The OWNER assumes no responsibility for any conclusions or interpretations made by the CONTRACTOR on the basis of the information made available by the OWNER.

Differing Site Conditions

4.4 (a) The CONTRACTOR shall promptly, and before such conditions are disturbed, notify the OWNER in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract. The

OWNER shall promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the contract modified in writing accordingly.

(b) No claim of the CONTRACTOR under this clause shall be allowed unless the CONTRACTOR has given the notice required in (a) above.

(c) No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

ARTICLE 5 - BONDS AND INSURANCE:

Performance and Payment Bonds:

5.1 The contractor's attention is directed to the Information for Bidders.

Contractor's Liability Insurance:

5.2 The CONTRACTOR shall provide the OWNER with insurance certificates certifying that all required insurance is in force; and such insurance certificates shall include provisions that the insurance shall not be canceled, allowed to expire or be materially changed without giving the OWNER advance notice by registered mail.

5.3 The CONTRACTOR agrees that if any part of the Work under the contract is sublet, he will require the Subcontractor(s) to carry insurance as required, and that he will require the Subcontractor(s) to furnish to him insurance certificates similar to those required by the OWNER in 5.1 above.

5.4 The CONTRACTOR agrees to add ENGINEER to insurance policy as additional insured.

Owner's Liability Insurance

5.4 The OWNER will be responsible for purchasing and maintaining his own liability insurance and, at his option, may purchase and maintain such insurance as will protect him against claims which may arise from operations under the Contract Documents.

Fire and Extended Coverage Insurance (Builders' Risk):

5.5 The CONTRACTOR shall maintain, as applicable, in an Insurance Company or Insurance Companies acceptable to the OWNER, Fire, Extended Coverage and Vandalism & Malicious Mischief Insurance on buildings and structures, while in the course of construction, including foundations, additions, attachments and all permanent fixtures belonging to and

constituting a part of said buildings or structures. The policy or policies shall also cover machinery, if the cost of machinery is included in the Contract. The amount of insurance should at all times be at least equal to the actual cash value of the insured property. The policy shall be in the name of the OWNER and the CONTRACTOR, as their interests may appear, and shall also cover the interests of all Subcontractors performing work.

5.6 The CONTRACTOR shall provide the OWNER with satisfactory evidence certifying that the foregoing insurance is in force; and such evidence shall include provisions that the insurance shall not be canceled, allowed to expire or be materially changed without giving the OWNER advance notice by registered mail.

Cancellation and Re-Insurance:

5.7 If any insurance should be canceled or changed by the insurance company or should any insurance expire during the period of this Contract, the CONTRACTOR shall be responsible for securing other acceptable insurance to provide the coverage specified in this section to maintain continuous coverage during the life of this Contract.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES:

Supervision and Superintendence:

6.1 The CONTRACTOR will supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work. (Copies of written communications given to the Superintendent shall be mailed to the Contractor's home or office.)

Labor, Materials and Equipment:

6.2 The CONTRACTOR will provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. He will at all times maintain good discipline and order at the site.

6.3 The CONTRACTOR will furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, local telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of the Work.

6.4 All materials and equipment will be new, except as otherwise provided in the Contract

Documents. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or approved, such materials shall be delivered to the site in their original packages or container with seals unbroken and labels intact.

6.5 All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processors, except as otherwise provided in the Contract Documents.

Materials, Equipment, Products and Substitutions:

6.6 Materials, equipment and products incorporated in the Work must be approved for use before being purchased by the CONTRACTOR. The CONTRACTOR shall submit to the ENGINEER a list of proposed materials, equipment or products, together with such samples as may be necessary for him to determine their acceptability and obtain his approval, within ninety (90) calendar days after award of Contract. No request for payment for "or equal" equipment will be approved until this list has been received and approved by the ENGINEER.

6.6.1 Whenever a material, article or piece of equipment is identified on the drawings or Specifications by reference to brand names or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand names or catalog number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Incidental charges or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the Contract Price, or Contract Time.

6.6.2 No substitute shall be ordered or installed without the written approval of the ENGINEER who shall be the judge of equality.

6.6.3 Delay caused by obtaining approvals for substitute materials will not be considered justifiable grounds for an extension of construction time.

6.6.4 Should any work or materials, equipment or products not conform to requirements of the Drawings and Specifications or become damaged during the process of the Work, such Work or materials shall be removed and replaced, together with any work disarranged by such alterations, at any time before completion and acceptance of the Project. All such work shall be done at the expense of the CONTRACTOR. (See paragraph 7.10)

6.6.5 No materials or supplies for the Work shall be purchased by the CONTRACTOR or by

any Subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the Seller. The CONTRACTOR warrants that he has good title to all materials and supplies used by him in the Work.

Concerning Subcontractors:

6.7 The CONTRACTOR will not employ any Subcontractor, other person or organization of the types referred to in paragraph 2.10 (whether initially or as a substitute) against whom the OWNER or the ENGINEER may have reasonable objection, nor will the CONTRACTOR be required to employ any Subcontractor against whom he has reasonable objection. The CONTRACTOR will not make any substitution for any Subcontractor who has been accepted by the OWNER and the ENGINEER, unless the ENGINEER determines that there is good cause for doing so.

6.8 The CONTRACTOR shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any Subcontractor or other person or organization having a direct contract with CONTRACTOR, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. OWNER or ENGINEER may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific Work done in accordance with the schedule of values.

6.9 The divisions and sections of the Specifications and the identifications of any drawings shall not control the CONTRACTOR in dividing the work among Subcontractors or delineating the Work to be performed by any specific trade.

6.10 The CONTRACTOR agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the OWNER.

6.11 All Work performed for the CONTRACTOR by a Subcontractor shall be pursuant to an appropriate agreement between the CONTRACTOR and the Subcontractor.

6.12 The CONTRACTOR shall be responsible for the coordination of the trades, Subcontractors and material men engaged upon his Work.

6.12.1 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the CONTRACTOR by the terms of these General Conditions and other Contract Documents insofar as applicable to the Work of Subcontractors, and to give the CONTRACTOR the same power as regards

terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provisions of the Contract Documents.

6.12.2 The OWNER or ENGINEER will not undertake to settle any differences between the CONTRACTOR and his Subcontractors or between Subcontractors.

6.12.3 If in the opinion of the ENGINEER, any Subcontractor on the project proves to be incompetent or otherwise unsatisfactory, he shall be replaced if and when directed in writing.

Patent Fees and Royalties:

6.13 The CONTRACTOR will pay all license fees and royalties and assume all costs incident to the use of any invention, design, process or device which is the subject of patent rights or copyrights held by others. He will indemnify and hold harmless the OWNER and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees) arising out of any infringement of such rights during or after completion of the Work, and shall defend all such claims in connection with any alleged infringement of such rights.

6.14 The CONTRACTOR shall be responsible for determining the application of patent rights and royalties on materials, appliances, articles or systems prior to bidding. However, he shall not be responsible for such determination on systems which do not involve purchase by him of materials, appliances, and articles.

Permits:

6.15 The CONTRACTOR will secure and pay for all construction permits and licenses and will pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of his Bid. When such charges are normally made by the OWNER, there will be no charges to the CONTRACTOR. The OWNER shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR will also pay all public utility charges.

Laws and Regulations:

6.16 The CONTRACTOR will give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the CONTRACTOR observes that the Specifications or Drawings are at variance therewith, he will give the ENGINEER prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Modification. If the CONTRACTOR performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the ENGINEER, he will bear all costs arising wherefrom; however, it shall not be his primary responsibility to make certain that the Drawings and Specifications are in accordance with such laws, ordinances, rules and

regulations.

Taxes:

6.17 Cost of all sales and other taxes for which the CONTRACTOR is liable under the Contract shall be included in the Contract Price stated by the CONTRACTOR.

Record Drawings:

6.18 The CONTRACTOR will keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to the Engineer and shall be delivered to him for the OWNER upon completion of the Project. It shall be used for this purpose only.

Safety and Protection:

6.19 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to:

6.19.1 All employees on the work and other persons who may be affected thereby.

6.19.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.

6.19.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

6.20 The CONTRACTOR will designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the CONTRACTOR'S superintendent unless otherwise designated in writing by the CONTRACTOR to the OWNER.

Emergencies:

6.21 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, is obligated to act, at his discretion, to prevent threatened damage, injury or loss. He will give the ENGINEER prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change

Order shall thereupon be issued covering the changes and deviations involved. If the CONTRACTOR believes that additional work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Price or an extension of the Contract Time, he may make a claim therefore as provided in Articles 11 and 12.

Shop Drawing and Samples:

6.22 After checking and verifying all field measurements, the CONTRACTOR will submit to the ENGINEER for review, in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.9) copies (or at the ENGINEER'S option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of the CONTRACTOR. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable the ENGINEER to review the information as required.

6.23 The CONTRACTOR will also submit to the ENGINEER for review, with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and stamped with the approval of the CONTRACTOR, identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.

6.24 At the time of each submission, the CONTRACTOR will in writing call the ENGINEER'S attention to any deviations that the Shop Drawings or sample may have from the requirements of the Contract Documents.

6.25 The ENGINEER will review with reasonable promptness Shop Drawings and samples, but his review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The review of a separate item as such will not indicate review of the assembly in which the item functions. The CONTRACTOR will make any corrections required by the ENGINEER and will return the required number of corrected copies of Shop Drawings and resubmit new samples until the review is satisfactory to the ENGINEER. The CONTRACTOR shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by the ENGINEER on previous submissions. The CONTRACTOR'S stamp of approval on any Shop Drawings or sample shall constitute a representative to the OWNER and the ENGINEER that the CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalogue numbers and similar data or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawings or sample with the requirements of the Work and the Contract Documents.

6.26 No Work requiring a Shop Drawing or sample submission shall be commenced until the submission has been reviewed by the ENGINEER. A copy of each Shop Drawing and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall

be available to the ENGINEER.

6.27 The ENGINEER'S review of Shop Drawings or samples shall not relieve the CONTRACTOR from his responsibility for any deviations from the requirements of the Contract Documents unless the CONTRACTOR has in writing called the ENGINEER'S attention to such deviation at the time of submission and the ENGINEER has given written approval to the specific deviation, nor shall any review by the ENGINEER relieve the CONTRACTOR from responsibility for errors or omission in the Shop Drawings.

Cleaning Up:

6.28 Site. The CONTRACTOR shall clean up behind the Work as much as is reasonably possible as the Work progresses. Upon completion of the Work, and before acceptance of and final payment for the Project by the owner, the CONTRACTOR shall remove all his surplus and discarded materials excavated material and rubbish from the roadways, sidewalks, parking areas, lawns and all adjacent property; shall clean his portion of Work involved in any building under this Contract, so that no further cleaning by the OWNER is necessary prior to his occupancy; shall restore all property, both public and private, which has been disturbed or damaged during the prosecution of the Work; and shall leave the whole in a neat and presentable condition.

6.29 Clean-up operations shall consistently be carried on by the CONTRACTOR at all times to keep the premises free from accumulation of waste materials and rubbish. Upon completion of the Work he shall remove all rubbish, tools, scaffolding, surplus materials, etc., and shall leave his work "broom clean", or its equivalent, unless more exactly specified elsewhere in the Contract. The General CONTRACTOR shall do the following special cleaning for all trades upon completion of the Work.

6.30 General. In case of dispute, the OWNER may remove the rubbish and charge the cost to the several contractors as the ENGINEER shall determine to be just.

Public Convenience and Safety:

6.31 The CONTRACTOR shall, at all times, conduct the Work in such a manner as to insure the least practicable obstruction to public travel. The convenience of the general public and of the residents along and adjacent to the area of the Work shall be provided for in a satisfactory manner, consistent with the operation and local conditions. "Street Closed" signs shall be placed immediately adjacent to the Work, in a conspicuous position at such locations as traffic demands. At any time that streets are required to be closed, the CONTRACTOR shall notify law enforcement agencies, fire departments, and parties operating emergency vehicles before the street is closed and again as soon as it is opened. Access to fire hydrants and other fire extinguishing equipment shall be provided and maintained at all times.

Sanitary Provisions:

6.32 The General CONTRACTOR shall furnish necessary toilet conveniences, secluded from public observation, for use of all personnel on the Work, whether or not in his employ. They shall be kept in a clean and sanitary condition and shall comply with the requirements and regulations of the Public Authorities having jurisdiction. He shall commit no public nuisance. Temporary sanitary facilities shall be removed upon completion of the Work and the premises shall be left clean.

Indemnification:

6.33 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss, or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than Work itself) including the loss of use resulting wherefrom and (b) is caused in whole or in part by any negligent act or omission of the CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

6.34 In any and all claims against the OWNER or the ENGINEER or any of their agents or employees, by any employee of the CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.33 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

6.35 The obligations of the CONTRACTOR under paragraph 6.33 shall not extend to the liability of the Engineer's negligent acts, errors or omissions or those of his employees or agents.

Responsibility for Connecting to Existing Work:

6.36 It shall be the express responsibility of the CONTRACTOR to connect his Work to each part of the existing work or work previously installed as required by the Drawings and Specifications to provide a complete installation.

Work in Street, Highway and Other Rights-of-Way:

6.37 Excavation, grading, fill, storm drainage, paving and any other construction or installations in rights-of-way of streets, highways, public carrier lines, utility lines (either aerial, surface or subsurface), etc., shall be done in accordance with requirements of the

special conditions. The OWNER will be responsible for obtaining all permits necessary for the work. Upon completion of the Work, CONTRACTOR shall present to ENGINEER certificates, in triplicate, from the proper authorities stating that the Work has been done in accordance with their requirements.

6.37.1 The OWNER will cooperate with the CONTRACTOR in obtaining action from any utilities or public authorities involved in the above requirements.

6.37.2 The ENGINEER shall be responsible for obtaining elevations of curbs and gutters, pavement, storm drainage structures, and other such items which must be established by governmental departments as soon as grading operations are begun on the site and, in any case, sufficiently early in the construction period to prevent any adverse effect on the Project.

Cooperation with Governmental Departments, Public Utilities, Etc:

6.38 The OWNER shall be responsible for making all necessary arrangements with governmental departments, public utilities, public carriers, service companies and corporations owning or controlling roadways, railways, water, sewer, gas, electrical, telephone, and telegraph facilities such as pavements, tracks, piping, wires, cables, conduits, poles, guys, etc., including incidental structure connected therewith, that are encountered in the work in order that such items may be properly shored, supported and protected, or the CONTRACTOR may relocate them if he so desires. The CONTRACTOR shall give all proper notices, shall comply with requirements of such parties in the performance of his Work, shall permit entrance of such parties on the Project in order that they may perform their necessary work, and shall pay all charges and fees made by such parties for this work.

6.38.1 The CONTRACTOR'S attention is called to the fact that there may be delays on the Project due to work to be done by governmental departments, public utilities, and others in repairing or moving poles, conduits, etc. The CONTRACTOR shall cooperate with the above parties, in every way possible, so that the construction can be completed in the least possible time.

6.38.2 The CONTRACTOR shall have made himself familiar with all codes, laws, ordinances and regulations which in any manner affect those engaged or employed in the Work, or materials and equipment used in or upon the Work, or in any way affect the conduct of the Work, and no plea of misunderstanding will be considered on account of his ignorance thereof.

Use of Premises:

6.39 CONTRACTOR shall confine his apparatus, storage of materials, and operations of his workmen to limits indicated by law, ordinances, permits, and directions of ENGINEER and OWNER, and shall not unnecessarily encumber any part of site.

6.39.1 CONTRACTOR shall not overload or permit any part of any structure to be loaded with such weight as will endanger its safety, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

6.39.2 CONTRACTOR shall enforce OWNER'S instructions in connection with signs, advertisements, fires and smoking.

6.39.3 CONTRACTOR shall arrange and cooperate with OWNER in routing and parking of automobiles of his employees, subcontractors and other personnel and in routing material delivery trucks and other vehicles to the Project Site.

Protection of Existing Property Improvements:

6.40 Any existing surface or subsurface improvements, such as pavements, curbs, sidewalks, pipes or utilities, footings or structures (including portions thereof), trees, and shrubbery not indicated on the Drawings or noted in the Specifications as being removed or altered shall be protected from damage during construction of the Project. Any such improvements damaged during construction of the Project shall be restored to a condition equal to that existing at time of award of Contract.

Temporary Heat:

6.41 The General CONTRACTOR shall provide heat, fuel and services as necessary to protect all work and materials, within all habitable areas of permanent building construction, for all contracts against injury from dampness and cold until final acceptance of all work and materials for the Project, unless building is fully occupied by the OWNER prior to such acceptance, in which case the OWNER shall assume all expenses of heating from date of full occupancy. In areas outside those covered above, each prime contractor shall be responsible for providing such temporary heat, fuel and services as required to protect his work or shall make all necessary arrangements with the General CONTRACTOR for providing such temporary heat, fuel and services. Unless otherwise specifically permitted by Special Conditions, the permanent heating system shall not be used to provide temporary heat. CONTRACTOR'S proposed methods of heating shall be submitted for approval.

ARTICLE 7 - WORK BY OTHERS:

7.1 The OWNER may perform additional work related to the Project by himself, or he may let other direct contracts therefore which shall contain General Conditions similar to these. The CONTRACTOR will afford the other contractors who are parties to such direct contracts (or the OWNER, if he is performing the additional work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his Work with theirs.

7.2 If any part of the CONTRACTOR'S work depends for proper execution or results upon the work of any such other CONTRACTOR (or the OWNER), the CONTRACTOR will promptly report to the ENGINEER in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results.

7.3 The CONTRACTOR will do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. The CONTRACTOR will not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the ENGINEER and of the other contractors whose work will be affected.

7.4 If the performance of additional work by other contractors or the OWNER is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional work. If the CONTRACTOR believes that the performance of such additional work by the OWNER or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefore as provide in Articles 11 and 12.

7.5 Where practicable, the General CONTRACTOR shall build around the work of other separate contractors or shall leave chases, slots and holes as required to receive and to conceal within the general construction work the work of such other separate contractors as directed by them. Where such chases, slots, etc., are impracticable, the work shall require specific approval of the ENGINEER.

7.6 Necessary chases, slots and holes not built or left by the General CONTRACTOR shall be cut by the separate contractor requiring such alterations after approval of the General CONTRACTOR. The General CONTRACTOR shall do all patching and finishing of his Work where cut by other contractors at the expense of such other contractors.

7.7 Cooperation is required in the use of site facilities and in the detailed execution of the Work. Each CONTRACTOR shall coordinate his operations with those of the other contractors for the best interest of the Work in order to prevent delay in the execution thereof.

7.8 Each CONTRACTOR shall keep himself informed of the progress of the work of other contractors. Should lack of progress or defective workmanship on the part of other contractors interfere with his operations, the CONTRACTOR shall notify the ENGINEER immediately. Lack of such notice to the ENGINEER will be construed as acceptance by the CONTRACTOR of the status of the work of other contractors as being satisfactory for proper coordination of his own work.

7.9 Each CONTRACTOR shall give notices of the progress of his work so as to allow other contractors adequate opportunity to properly direct and coordinate their work. The General

Contractor shall give notices of the progress of his Work so that work of other contractors, when required to be concealed, may be placed before the general construction Work. All such notices shall be submitted to the ENGINEER with copies to other prime contractors on the Project sufficiently ahead of job progress to permit adequate time for the other prime contractors to coordinate their work.

7.10 The cost of extra work resulting from lack of notices, untimely notices, failure to respond to notices, defective work or lack of coordination shall be borne by the CONTRACTOR responsible for such lack of notices, etc.

ARTICLE 8 - OWNER'S RESPONSIBILITIES:

8.1 The OWNER will issue all communications to the CONTRACTOR through the ENGINEER.

8.2 In case of termination of the employment of the ENGINEER, the OWNER will appoint an engineer against whom the CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER. Any dispute in connection with such appointment shall be subject to arbitration, if mutually agreeable.

8.3 The OWNER will furnish the data required of him under the Contract Documents promptly and shall make payments to the CONTRACTOR promptly after they are due as provided in Article 14.

8.4 OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1, 4.4 and the Special Conditions. Paragraphs 4.2 and 4.3 refer to OWNER'S identifying and making available to CONTRACTOR copies of surveys and investigation reports of subsurface and latent physical conditions at the site or otherwise affecting performance of the Work which have been relied upon by ENGINEER in preparing the Drawings and Specifications.

8.5 The OWNER'S responsibilities in respect of liability and property insurance are set forth in paragraph 5.4.

8.6 In addition to his rights to request changes in the Work in accordance with Article 10, the OWNER (especially in certain instances as provided in paragraph 10.4) will be obligated to execute Change Orders.

8.7 In connection with the OWNER'S right to stop Work or suspend Work; see paragraph 15.1. Paragraph 15.3 deals with the OWNER'S right to terminate services of the CONTRACTOR under certain circumstances.

8.8 The OWNER shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding the fact that the time for

completing the entire Work or any portion thereof may not have expired; but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the Work, the CONTRACTOR shall be entitled to such extra compensation or extension of time or both, except by prior agreement, as the ENGINEER may determine. See paragraph 14.11.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION:

Owner's Representative:

9.1 The ENGINEER shall be the OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of the ENGINEER as the OWNER'S representative during construction are set forth in Articles 1 through 17 of these General Conditions and shall not be extended without written consent of the OWNER and the ENGINEER.

9.1.1 The ENGINEER'S decision, in matters relating to aesthetics shall be final, if within the terms of the Contract Documents.

9.1.2 Except as may be otherwise provided in this contract all claims, counter-claims, disputes and other matters in question between the OWNER and the CONTRACTOR arising out of or relating to this agreement or the breach thereof will be decided by arbitration if the parties hereto mutually agree, or in a court of competent jurisdiction within the State in which the OWNER is located.

Visits to Site:

9.2 The ENGINEER will make periodic visits to the site to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. He will not be required to make continuous on-site observations to check the quality or quantity of the Work. His efforts will be directed toward ascertaining on behalf of the OWNER that the completed Project will conform to the requirements of the Contract Documents. On the basis of his on-site observations as an experienced and qualified design professional, he will keep the OWNER informed of the progress of the Work and will endeavor to guard the OWNER against defects and deficiencies in the Work of contractors.

Clarifications and Interpretations:

9.3 The ENGINEER will issue with reasonable promptness such written clarification or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If the Contractor believes that a written

clarification and interpretation entitles him to an increase in the Contract Price or extension of Contract Time, he may make a claim therefore as provided in Articles 11 and 12.

Measurement of Quantities:

9.4 All Work completed under the Contract will be measured by the ENGINEER according to the United States Standard Measures. All linear surface measurements will be made horizontally or vertically as required by the item measured.

Rejecting Defective Work:

9.5 The ENGINEER will have authority to disapprove or reject Work which is "defective" (which term is hereinafter used to describe Work that is unsatisfactory, faulty or defective, or does not meet the requirements of any inspection, test or approval or has been damaged prior to final acceptance). He will also have authority to require special inspection or testing of the Work whether or not the Work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments:

9.6 In connection with the ENGINEER'S responsibility as to Shop Drawings and samples, see paragraphs 6.22 through 6.27, inclusive.

9.7 In connection with the ENGINEER'S responsibility for Change Orders; see Articles 10, 11, and 12.

9.8 In connection with the ENGINEER'S responsibilities in respect of Application for Payment, etc., see Article 14.

Resident Project Representative:

9.9 The OWNER or the ENGINEER will provide on-site representation sufficient to guarantee that construction is in general compliance with the construction drawings and the contract specifications.

Decisions on Disagreements:

9.10 The ENGINEER will be the initial interpreter of the terms and conditions of the Contract Documents and the judge of the performance hereunder. In his capacity as interpreter and judge, he will exercise his best efforts to insure faithful performance by both the OWNER and the CONTRACTOR. He will not show partiality to either and shall not be liable for the result of any interpretation or decision rendered in good faith. Claims, disputes and other matters relating to the execution and progress of the Work or the interpretation of or performance under the Contract Documents shall be referred initially to the ENGINEER for decision; which he shall render in writing within a reasonable time.

9.11 Either the OWNER or the CONTRACTOR, if the other agrees, may request legal action with respect to any such claim, dispute or other matter that has been referred to the ENGINEER, except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.11, such legal action to be in accordance with Article 16. However, no request for legal action of any such claim, dispute or other matter shall be made until the earlier of (a) the date on which the ENGINEER has rendered his decision or (b) the tenth day after the parties have presented their evidence to the ENGINEER if he has not rendered his written decision before that date. No request for legal action shall be made later than thirty (30) days after the date on which the ENGINEER rendered his written decision in respect of the claim, dispute or other matter as to which legal action is sought; and the failure to request legal action within said thirty (30) days period shall result in the ENGINEER'S decision being final and binding upon the OWNER and the CONTRACTOR. If the ENGINEER renders a decision after legal proceedings have been initiated, such decision may be entered as evidence but shall not supersede the legal proceedings, except where the decision is acceptable to the parties concerned.

Limitations on Engineer's Responsibilities:

9.12 Neither the ENGINEER'S authority to act under this Article 9 nor any decision made by him in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ENGINEER to the CONTRACTOR, any Subcontractor, any of their agents or employees or any other person performing any of the Work.

9.13 The ENGINEER will not be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions and programs incident thereto, and he will not be responsible for the CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

9.14 The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR, or any Subcontractors, or any of his or their agents or employees, or any other person performing any of the Work.

ARTICLE 10 - CHANGES IN THE WORK:

10.1 Without invalidating the Agreement, the OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by Change Orders. Upon receipt of a Change Order, the CONTRACTOR will proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 11 or Article 12. A Change Order signed by the CONTRACTOR indicates his agreement therewith.

10.2 The ENGINEER may authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If the CONTRACTOR believes that any minor change or alteration authorized by the ENGINEER entitles him to an increase in the Contract Price or extension of Contract Time, he may make a claim therefore as provided in Articles 11 and 12.

10.3 Additional Work performed by the CONTRACTOR without authorization of a Change Order will not entitle him to an increase in the Contract Price or an extension of the Contract Time, except in the case of an emergency as provided in paragraph 6.21 and except as provided in paragraph 10.2.

10.4 The OWNER will execute appropriate Change Orders prepared by the ENGINEER covering changes in the Work to be performed as provided in paragraph 4.4, and Work performed in an emergency as provided in paragraph 6.21 and any other claim of the CONTRACTOR for a change in the Contract Time or the Contract Price which is approved by the ENGINEER.

10.5 It is the CONTRACTOR'S responsibility to notify his surety of any changes affecting the general scope of the Work or change in the Contract Price and the amount of the applicable bonds shall be adjusted accordingly. The CONTRACTOR will furnish proof of such adjustment to the OWNER.

ARTICLE 11 - CHANGE OF CONTRACT PRICE:

11.1 The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the CONTRACTOR shall be at his expense without changing the Contract Price.

11.2 (a) The OWNER may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make any change in the Work within the general scope of the contract, including but not limited to changes:

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) In the Owner-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written order or an oral order (which terms as used in this paragraph (b) shall include direction, instruction, interpretation or determination) from the OWNER, which causes any such change, shall be treated as a change order under this clause, provided that the CONTRACTOR gives the OWNER written notice stating the date, circumstances, and source of the order and that the CONTRACTOR regards the order as a change order.

(c) Except as herein provided, no order, statement, or conduct of the OWNER shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment hereunder.

(d) If any change under this clause causes an increase or decrease in the CONTRACTOR'S cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any order, an equitable adjustment shall be made and the contract modified in writing accordingly: PROVIDED, HOWEVER, that except for claims based on defective specifications, no claim for any change under (b) above shall be allowed for any costs incurred more than 20 days before the CONTRACTOR gives written notice as therein required. And provided further, that in the case of defective specifications for which the OWNER is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the CONTRACTOR in attempting to comply with such defective specifications.

(e) If the CONTRACTOR intends to assert a claim for an equitable adjustment under this clause, he must, within 30 days after receipt of a written change order under (a) above or the furnishing of a written notice under (b) above, submit to the OWNER a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the OWNER. The statement of claim hereunder may be included in the notice under (b) above.

(f) No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

11.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

11.3.1 Where the Work involved is covered by unit prices contained in the Contract

Documents by application of unit prices to the quantities of the items involved. Should the Work (by quantity) be increased or decreased by 15 per cent from that stipulated in the Contract Documents, the OWNER and the CONTRACTOR may request adjustment of the unit prices by negotiation. If negotiation fails to reach agreement, then either party may request arbitration for the volume in excess of the 15 per cent differential.

11.3.2 By negotiated lump sum.

11.3.3 The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work plus a fixed amount to be agreed upon to cover the cost of general overhead and profit to be negotiated.

11.4 The term Cost of the Work means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. Except as otherwise maybe

agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

11.4.1 Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to salaries and wages plus the costs of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing work after regular working hours, on Sunday or legal holidays shall be included in the above to the extent authorized by OWNER.

11.4.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturer's field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

11.4.3 Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to him and shall deliver such Bids to OWNER who will then determine with the advice of ENGINEER, which Bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of Work plus a Fee, the cost of the Work shall be determined in accordance with paragraphs 11.4 and 11.5.

11.4.4 Costs of special consultants (including but not limited to, engineers, architects, testing laboratories, surveyors, lawyers and accountants) employed for services specifically related to the Work.

11.4.5 Supplemental costs including the following:

11.4.5.1 The proportion of necessary transportation, travelling and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

11.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workmen, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

11.4.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or other in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the cost of transportation, loading, unloading, installation, dismantling and removal thereof--all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall end when the use thereof is no longer necessary for the Work.

11.4.5.4 Sales, use or similar taxes related to the Work, and for which CONTRACTOR is liable imposed by any governmental authority.

11.4.5.5 Deposits lost for causes other than CONTRACTOR'S negligence, royalty payments and fees for permits and licenses. Costs for permits and licenses must be shown as a separate item.

11.4.5.6 Losses, damages and expenses, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the execution of, and to, the Work, provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractors, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of Work for the purpose of determining CONTRACTOR'S fee. If however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, he shall be paid for his services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7 The cost of utilities, fuel and sanitary facilities at the site.

11.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.4.5.9 Cost of premiums for additional Bonds and Insurance required because of changes in the Work.

11.5 The term cost of the Work shall not include any of the following:

11.5.1 Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals, (of partnership and sole proprietorships), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in his principal or a branch office for general administration of the Work and not specifically included in the schedule referred to in subparagraph 11.4.1 -- all of which are to be considered administrative costs covered by the CONTRACTOR'S Fee.

11.5.2 Expenses of CONTRACTOR'S principal and branch offices other than his office at the

site.

11.5.3 Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR'S for delinquent payments.

11.5.4 Cost of premiums for all bonds and for all insurance policies whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except as otherwise provide in subparagraph 11.4.5.9.)

11.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractors, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable including but not limited to, the correction of defective work, disposal of materials or equipment wrongly supplied and making good any damage to property.

11.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

11.6 The CONTRACTOR'S Fee which shall be allowed to CONTRACTOR for his overhead and profit shall be determined as follows;

11.6.1 A mutually acceptable firm fixed price; or if none can be agreed upon,

11.6.2 A mutually acceptable fixed fee based on the estimate of the various portions of the Cost of the Work.

11.7 The amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the net shall be computed to include overhead and profit, identified separately, for both additions and credits.

11.8 Whenever the cost of any Work is to be determined pursuant to paragraphs 11.4 and 11.5, CONTRACTOR will submit in form prescribed by ENGINEER an itemized cost breakdown together with supporting data.

11.9 Allowances: It is understood that the CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such material men, suppliers, or Subcontractors and for such sums within the limit of the allowances as the ENGINEER may approve. Upon final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. The CONTRACTOR agrees that the original Contract Price includes such sums as he deems proper for costs and profit on account of cash allowances. No demand for additional cost or

profit in connection therewith will be allowed.

11.9.1 These allowances shall cover the cost to the CONTRACTOR less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and all applicable taxes.

11.9.2 The CONTRACTOR'S costs for unloading and handling on site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Price and not in the allowance.

11.9.3 Whenever the cost, as described in 11.9.1 above, is more than or less than the allowance, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses, except that whenever unit price allowances are stipulated for brick, the Change Order will not include any cost as described in 11.5 above.

ARTICLE 12 - CHANGE OF THE CONTRACT TIME:

12.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to OWNER and ENGINEER within ten days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by ENGINEER if OWNER and CONTRACTOR cannot otherwise agree. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if he makes a claim therefore as provided in paragraph 12.1. Such delays shall include, but not be restricted to, acts or neglect by any separate contractor employed by OWNER, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

12.3 All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of the Article 12 shall not exclude recovery for damages (including compensation for additional professional services) for delay by either parties.

12.4 No claim for delay shall be allowed because of failure to furnish Drawings until two weeks after demand for such drawings and not then unless such claim be reasonable.

12.5 This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

ARTICLE 13 - GUARANTY:

13.1 The CONTRACTOR shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs or adjustments, in the Work that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

ARTICLE 14 - PAYMENTS AND COMPLETION:

Payments to Contractors:

14.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within sixty (60) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER may retain a portion of the amount otherwise due the CONTRACTOR. Except as State law otherwise provides, the amount the OWNER retains shall be limited to the following:

14.1.1 Withholding of not more than 10 per cent of the payment claimed until work is 50 per cent complete;

14.1.2 When Work is 50 per cent complete, reduction of the withholding to 5 per cent of the dollar value of all Work satisfactorily completed to date, provided that the CONTRACTOR is making satisfactory progress and there is no specific cause for greater withholding;

14.1.3 When the Work is substantially complete (operational or beneficial occupancy), the withheld amount shall be further reduced below 5 per cent to only that amount necessary to assure completion.

14.1.4 The OWNER may reinstate up to 10 per cent withholding if the OWNER determines, at its discretion, that the CONTRACTOR is not making satisfactory progress or there is other specific cause for such withholding.

Contractor's Warranty of Title:

14.2 The CONTRACTOR warrants and guarantees that title to all work, materials and equipment covered by an Application for Payment, whether incorporated in the Project or not, will have passed to the OWNER prior to the making of the Application for payment, free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens") and that no work, materials or equipment covered by an Application for Payment will have been acquired by the CONTRACTOR or by any other person performing the Work at the Site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the CONTRACTOR or such other person.

Approval of Payments:

14.3 The ENGINEER'S approval of any payment requested in an Application for Payment shall constitute a representation by him to the OWNER, based on the ENGINEER'S on-site observations of the Work in progress as an experienced and qualified design professional and on his review of the Application of Payment and the supporting data, that the Work has progressed to the point indicated; That, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in his approval), and that the CONTRACTOR is entitled to payment of the amount approved. However, by approving any such payment, the ENGINEER shall not thereby be deemed to have represented that he made exhaustive or continuous on-site observations to check the quality or the quantity of the Work, or that he has reviewed the means, methods, techniques, sequences, and procedures of construction or that he has made any examination to ascertain how or for what purpose the CONTRACTOR has used the moneys paid or to be paid to him on account of the Contract Price, or that title to any Work, materials, or equipment has passed to the OWNER free and clear of any Liens.

14.4 The CONTRACTOR shall make the following certification on each request for payment:
"I hereby certify that the labor and materials listed on this request for payment has been used in the construction of this work or that all materials included in this request for payment and not yet incorporated into the construction are now on the site or stored at an approved location; and payment received from the last request for payment has been used

to make payments to all first tier subcontractors and suppliers except as listed below."

14.5 The ENGINEER'S approval of final payment shall constitute an additional representation by him to the OWNER that the conditions precedent to the CONTRACTOR'S being entitled to final payment as set forth in paragraph 14.11 have been fulfilled.

14.6 The ENGINEER may refuse to approve the whole or any part of any payment if, in his opinion, he is unable to make such representations to the OWNER. He may also refuse to approve any such payment, because of subsequently discovered evidence or the results of subsequent inspections or tests nullify any such payment previously approved, to such extent as may be necessary in his opinion to protect the OWNER from loss because:

14.6.1 The Work is defective, or completed Work has been damaged requiring correction or replacement,

14.6.2 The Work for which payment is request cannot be verified,

14.6.3 Claims or Liens have been filed or there is reasonable evidence indicating the probable filing thereof,

14.6.4 The Contract Price has been reduced because of Modifications,

14.6.5 The OWNER has been required to correct defective Work or complete the Work in accordance with paragraph 13.1,

14.6.6. Of unsatisfactory prosecution of the Work, including failure to clean up as required by paragraphs 6.29 and 6.30,

14.6.7. Of persistent failure to cooperate with other contractors on the Project and persistent failure to carry out the Work in accordance with the Contract Documents,

14.6.8. Of liquidated damages payable by the CONTRACTOR or,

14.6.9. Of any other violation of, or failure to comply with, the provisions of the Contract Documents.

14.7 Prior to Substantial Completion, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the Work. Such use shall not constitute and acceptance of such portions of the Work.

14.8 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the Contract Documents. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the Work, or

restoration of any damaged Work, except such as may be caused by agents or employees of the OWNER.

14.9 Upon completion and acceptance of the Work, the ENGINEER shall issue a certificate attached to the final payment request that the Work has been accepted by him under the conditions of the Contract Documents. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the Work.

14.10 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the Contract Documents by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

Acceptance of Final Payment as Release:

14.11 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this Work and for every act and neglect of the OWNER and others relating to or arising out of this Work. Any payment however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the Contract Documents or the Performance Bond and Payment Bonds.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION:

Owner May Suspend Work:

15.1 The OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to the CONTRACTOR

and the ENGINEER which shall fix the date on which Work shall be resumed. The CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefore as provided in Articles 11 and 12.

Work During Inclement Weather:

15.2 No Work shall be done under these Specifications except by permission of the OWNER when the weather is unfit for good and careful work to be performed. Should the severity of the weather continue, the CONTRACTOR, upon the direction of the OWNER, shall suspend all work until instructed to resume operations by the OWNER and the Contract Time shall be extended to cover the duration of the order. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the CONTRACTOR. Any compensation for repairs or replacements shall be subject to approval of the OWNER.

Owner May Terminate:

15.3 If the CONTRACTOR is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property; or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to Subcontractors or for labor, materials or equipment or he disregards laws, ordinances, rules regulations or orders of any public body having jurisdiction, or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the Contract Documents, then the OWNER may without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety seven days written notice, terminate the services of the CONTRACTOR and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the Work by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to the CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR or the Surety will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a Change Order.

15.4 Where the CONTRACTOR'S services have been so terminated by the OWNER, said terminations shall not affect any rights of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys by the OWNER due the CONTRACTOR will not release the CONTRACTOR from liability.

15.5 Upon seven days written notice to the CONTRACTOR and the ENGINEER, the OWNER

may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Agreement. In such case, the CONTRACTOR shall be paid for all Work executed and any expense sustained plus a reasonable profit.

Removal of Equipment:

15.6 In the case of termination of this Contract before completion, for any cause whatever, the CONTRACTOR if notified to do so by the OWNER, shall promptly remove any part or all of his equipment and supplies from the property of the OWNER. Should the CONTRACTOR not remove such equipment and supplies, the OWNER shall have the right to remove them at the expense of the CONTRACTOR. Equipment and supplies shall not be construed to include such items for which the CONTRACTOR has been paid in whole or in part.

Contractor May Stop Work or Terminate:

15.7 If, through no act or fault of the CONTRACTOR, the Work is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any Application for Payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR any sum approved by the ENGINEER or awarded by court ruling within thirty (30) days of its approval and presentation, then the CONTRACTOR may, upon seven (7) days written notice to the OWNER and the ENGINEER, terminate the Agreement and recover from the OWNER payment for all Work executed and any expense sustained plus a reasonable profit. In addition and in lieu of terminating the Agreement, if the ENGINEER has failed to act on an Application for Payment or the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon seven (7) days notice to the OWNER and the ENGINEER stop the Work until he has been paid all amounts then due.

Owner Furnished Equipment:

15.8 In case the OWNER furnishes equipment to the CONTRACTOR to install, but fails to deliver it to the CONTRACTOR as required and in case such failure causes the CONTRACTOR additional expense or need for extension of time, the CONTRACTOR may make such claims upon the OWNER and obtain adjustments as provided herein.

Liquidated Damages:

15.9 If the CONTRACTOR shall fail to complete the work within the contract time, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the Contract Documents for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the Contract Documents.

ARTICLE 16 - DISPUTE SETTLEMENT:

16.1 All claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof except for claims which have been waived by the making or acceptance of final payment as provided by paragraph 14.11, shall be decided in a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS:

17.1 Whenever any provision of the Contract Documents requires the giving of written notice it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to him who gives the notice.

17.2 If the OWNER fails to make payment sixty (60) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such progress payment, interest at 1% per month commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

17.3 All Specifications, Drawings and copies thereof furnished by the ENGINEER shall remain his property. They shall not be used on another Project, and, with the exception of those sets which have been signed in connection with the execution of the Agreement, shall be returned to him on request upon completion of the Project.

17.4 The duties and obligations imposed by these General Conditions, and the rights and remedies available hereunder, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.36 and 14.3 and the rights and remedies available to OWNER and ENGINEER there under, shall be in addition to, and shall not be construed in any way as a limitation of, any rights and remedies available by law, by special guarantee or by other provisions of the CONTRACT DOCUMENTS.

17.5 Should the OWNER or the CONTRACTOR suffer injury or damage to its person or property because of any error, omission or act of the other or of any of his employee or agents or others for whose acts he is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage.

17.6 The CONTRACT DOCUMENTS shall be governed by the law of the place of the Project.

Progress Charts and Requirements for Overtime Work

17.7 The CONTRACTOR shall within 5 days or within such time as determined by the

OWNER after date of commencement of work prepare and submit to the OWNER for approval a practicable schedule, showing the order in which the CONTRACTOR proposes to carry on the work, the date on which he will start the several salient features (including procurement of materials, plans and equipment) and the contemplated dates for completing the same. The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion at any time. The CONTRACTOR shall enter on the chart the actual progress at such intervals as directed by the OWNER and shall immediately deliver to the OWNER three (3) copies thereof. If the CONTRACTOR fails to submit a progress schedule within the time herein prescribed, the owner may withhold approval of progress payment estimates until such time as the CONTRACTOR submits the required progress schedule.

If, in the opinion of the OWNER, the CONTRACTOR falls behind the progress schedule, the CONTRACTOR shall take such steps as may be necessary to improve his progress and the OWNER may require him to increase the number of shifts, or overtime operations, days of work, or the amount of construction plant, or update the progress schedule to reflect increased production for meeting the completion date, or all of them, and to submit for approval such supplementary schedule or schedules in chart form as may be deemed necessary to demonstrate the manner in which the agreed rate of progress will be regained, all without additional cost to the OWNER.

Failure of the CONTRACTOR to comply with the requirements of the OWNER under this provision shall be grounds for determination by the OWNER that the CONTRACTOR is not prosecuting the work with such diligence as will insure completion within the time specified. Upon such determination the OWNER may terminate the CONTRACTOR'S right to proceed with the work or any separable part thereof in accordance with the clause of the contract entitled, "Termination for Default-Damages for Delay - Time Extensions.

Should the Contractor fail to complete the work within the specified time, or within any extra time allowed under these specifications, a sum of money, determined by the following schedule, shall be deducted from any funds due the Contractor, the Owner shall have the right recover the said sum or sums from the Contractor or from the surety, or from both. The amounts of these deductions are to cover the liquidated damages to the Owner incurred by additional or other expenses due to the failure of the Contractor to complete the work or any part of the work within the time specified, and such deductions are not to be considered penalties.

The damages indicated above shall be considered as liquidated damages for the loss to the Owner on account of the expense due to the employment of Engineers and their assistants and to any others expenses incurred after the expiration of the Contract time as determined by the Engineer.

SECTION 01 00 00
SUPPLEMENTAL GENERAL

- 1.01 The Technical Specifications entitled “Mississippi Standard Specifications for Road and Bridge Construction, Current Edition” shall be the specifications applicable to this project except as for herein specified. Any testing required by those specifications for material submittal approval shall be the responsibility of the Contractor. The testing laboratory used by the Contractor shall be a laboratory certified by the Mississippi Department of Transportation and shall be approved by the Contracting Officer. Any reference to Unit Item for pay shall be deleted, as the Project is Lump Sum.
- 2.01 Any reference in the above mentioned specifications to Commission, Director, Chief Engineer, Testing Engineer, or Project Engineer shall be amended in these specifications to mean the Contracting Officer, or his duly authorized representative, of the Mississippi Military Department.

ADDITIONAL PROJECT INFORMATION

- 1.01 Project Superintendent: The contractor shall have a competent and experienced superintendent on the project at all times. This project superintendent shall not operate any equipment while on the project site. Work on the project shall stop if the assigned superintendent is not on site. At all times shall mean during all phases of construction including but not limited to electrical, civil, structural and all other unnamed phases of construction. Contractor shall be limited to one approved change of superintendent during construction.

SPECIAL CONDITIONS

1. SCOPE AND INTENT

Special conditions shall prevail over General Conditions in case of conflict. The Contractor shall furnish all labor, materials, equipment (including fuel), tools, appliances, transportation and perform all operations in connection with the construction of, alterations to, or repair of, the building, including utilities, complete, in strict accordance with the specifications and the plans governing the construction of, alterations to, or repair of, the buildings.

2. EXAMINATION OF PREMISES

Before submitting a proposal for his work, each bidder shall be held responsible to have examined the site and satisfied himself as to the conditions under which work is to be performed.

3. PERMITS, TAXES, AND ORDINANCES

The Contractor shall pay for all required permits, give legal notices, pay taxes and assessments levied in connection with this contract. Building regulations of the local county or the Southern Building Codes shall be strictly adhered to and the contractor shall be responsible for knowledge thereof.

4. INSURANCES, ETC.

The Contractor, for himself and any subcontractors, shall effect and maintain at his own expense, insurance satisfactory to the Owner in minimum amounts as follows:

- A. Contractor and Subcontractors shall in all things, conform to the requirements of the Workman's Compensation Act of the Laws of the State of Mississippi and qualify thereunder as a condition precedent to the performance of this contract. Contractor shall, as required by Owner to do so, submit satisfactory proof of qualifications and conformity of himself and each subcontractor with said Act.
- B. Manufacturer's or Contractor's Public Liability Insurance is not less than **\$100,000** and **\$300,000** limits Bodily Injury and Property Damage Insurance in not less than **\$50,000** and **\$100,000** limits.
- C. Contractor's Protective Public Liability Insurance in not less than **\$100,000** and **\$300,000** limits Bodily Injury and Property Damage Insurance in not less than **\$50,000** and **\$100,000** limits.
- D. Automobile Public Liability Insurance is not less than **\$100,000** and **\$500,000** limits Bodily Injury and Property Damage Insurance in not less than **\$50,000** limits.

5. CLEANING UP

The Contractor shall, at all times, keep the premises free from accumulations of waste materials and at the completion of the work, be shall remove all his rubbish, tools,

temporary buildings, etc. from and about the site and shall leave his work broom clean unless more exactly specified elsewhere. All glass shall be washed and left free from stains of any nature.

6. GUARANTEE

The Contractor shall guarantee to the City of Hattiesburg all work under this contract to be free from defects in workmanship and materials for a period of one (1) year from date of final acceptance.

MEASUREMENT AND PAYMENT

Measurement and Payment for the following bid items shall be as described and shall include all material, equipment, labor, testing, etc. to install and make operational a complete water system as detailed on the contract drawings and as specified in the contract documents.

TEST HOLE

Payment for item shall consist of all components required to establish a test hole for the depth as indicated on the proposal. Test Hole shall provide data including electric log, sieve analysis, etc as commonly provided in water well construction. Payment shall include all items necessary to provide information to the owner including labor, materials and equipment. Payment shall be lump sum.

1500 GPM WATER WELL

Payment for furnishing and installing well, will be made at the contract unit price per well according to type and size as listed in the Proposal and shall include all pumps, valves, associated piping, etc. as detailed in these specifications or shown in the plans. It shall include but not limited to air release valve, blind flanges, check valves, elbows spools, ductile iron water line, valves tie-in, etc. as necessary based on the plans and specifications. Other items will be as outlined in the proposal as it relates to actual construction of water well. The contract price shall be lump sum.

MASTER WATER METER

Payment for master water meter shall include all materials, labor and equipment necessary to install the meter and wiring as related to a functioning meter as detailed in the specifications. The contract price shall be per each.

YARD PIPING- 12 INCH DUCTILE IRON

Payment for item shall include all components located below the ground between the well pump motor and the existing aerator. The contract price shall be per linear foot.

CHAIN-LINK FENCE AND GATE

Basis of payment shall include the plans as noted and shall be according to the Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition. Payment to be made per linear foot. No distinction will be made between fencing and gate with regards to payment.

ELECTRICAL WORK

Payment for item shall include all components as necessary to provide electrical power upgrades to the site. Payment shall include all items necessary to provide electrical service to the well site including labor, materials and equipment. Payment shall be lump sum.

WELL CONTROLS

Payment for well controls shall include all materials and installation of control system relating to but not limited to wells, lights, etc., to make an operational system. Controls shall function with existing systems at treatment plant site. System shall include necessary telemetry components as necessary. The contract price shall be lump sum.

EROSION CONTROL

Payment for erosion control shall include furnishing, installing and maintaining silt fence as required by current Mississippi Department of Environmental Quality standards. Silt fence shall be installed and maintained as directed by the Engineer to prevent erosion under or excess siltation within 24 hours of a rain event. The unit measurement shall be Lump Sum and includes any required maintenance.

GRASSING

Basis of payment shall include the vegetation schedule as noted and shall be according to the Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition.

CLOSE-OUT DOCUMENTS

In general documents for close out, to be submitted by the Contractor to the Owner, prior to final payment, shall be; but not limited to the following:

1. APPLICATION FOR PAYMENT: AIA Document G-702
2. CERTIFICATE OF SUBSTANTIAL COMPLETION: AIA Document G-704
3. CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS:

AIA Documents G-706 and G-706A: The Contractor shall furnish these AIA Documents complete with attached notarized full release of liens, damages, and a guarantee that all materials and labor are paid in accordance with Contract Documents with the following wording:

WE HEREBY CERTIFY THAT ALL BILLS FOR LABOR AND MATERIALS INCORPORATED INTO THE ABOVE CAPTIONED PROJECT UNDER OUR CONTRACT HAVE BEEN PAID AND THAT THE OWNER IS RELEASED FROM ANY AND ALL CLAIMS AND/OR DAMAGES UNDER THIS CONTRACT.

4. CONSENT OF SURETY COMPANY TO FINAL PAYMENT: AIA Document G-707 to be completed in full by the Bonding Company.
5. CONTRACTOR'S NOTARIZED STATEMENT:
Notarized statement that project has been constructed in accordance with Contract Documents.
6. CONTRACTOR'S NOTARIZED STATEMENT OF GUARANTEE/S:
Reference: Page GWB-1 of Specifications. All work will be guaranteed by the Contractor for a period of one (1) year from the date of substantial completion. Wording will be as follows:

WE HEREBY GUARANTEE ALL WORK PERFORMED BY US ON ABOVE CAPTIONED PROJECT TO BE FREE FROM DEFECTIVE MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR OR SUCH LONGER PERIOD OF TIME AS MAY BE CALLED FOR IN THE CONTRACT DOCUMENTS FOR SUCH PORTIONS OF THE WORK.

In the case of work performed by his sub-contractors, the Contractor shall secure warranties from said sub-contractors and deliver copies of same to the Owner upon completion of work.

7. OPERATING AND MAINTENANCE MANUALS:

All manufacturer's operating instructions and maintenance manuals will be compiled in a tabbed and labeled 3-ring binder. **(Furnish Owner with two (2) sets).**

8. FORM W-9, PAYER'S REQUEST FOR TAXPAYER IDENTIFICATION NUMBER AND CERTIFICATION (IRS):

Form W-9 is to be completed by non-corporation contractors. Non-applicable if Contractor's firm is Incorporated.

9. FINAL CLEANING:

At close out time clean and re-clean entire work to normal level for FIRST CLASS maintenance/cleaning.

DETAILED SPECIFICATIONS
FOR
WATER SUPPLY

A. SCOPE:

The work includes the furnishing of all labor, tools, equipment, hauling, and necessary items for the construction of the water supply hereinafter specified. The Contractor is cautioned to read the Specifications thoroughly so there will be no questions as to compliance. The Contractor is required to submit with his bid information on the proposed Well materials and Pumping equipment to assure the Owner of compliance with the Specifications.

One Contractor shall perform all the work related to the construction of new Well with the Pump and Pump motor installation at the new Well. The Contractor shall be responsible for conforming to the Well and Pump Construction Specifications as well as the performance testing requirements. Refer to the proposal data sheets in the Specifications for specific requirements concerning the installation of each Well and Pump.

Upon completion of the project and prior to acceptance, the Well Contractor shall sterilize and re-sterilize the Wells as necessary until two consecutive samples of chlorine-free water are found to be free of organisms of the Coli Aerogenes group. Sample shall be taken and submitted in accordance with Mississippi State Board of Health Regulations.

Site work shall be coordinated between the Well Contractor and the Owner.

Discharge piping shall be installed as indicated on the plans between the Pump and the existing City piping. The Well Contractor is responsible for connecting to the existing line.

B. TEST HOLE:

1. Upon receipt of the written Notice to Proceed, and prior to construction of the permanent Well, the Contractor shall drill a test hole of approximately nine inches (9") in diameter to depth of not less than 850 feet. The test hole is to be drilled in order to determine the aquifer characteristics.
2. Sand samples shall be taken in duplicate of all sand formations encountered below 300 feet. There shall be provided a mud ditch of sufficient length for the sand cuttings to collect before the mud returns to the mud pit for re-pumping. After each

drill rod is cut down and the sand samples are collected, then collection ditch shall be cleaned of the cuttings and drilling shall continue. The Contractor shall have a sieve and flow analysis completed on each sand formation encountered that may be screened below 300 feet.

3. After the test hole has been completed to the specified depth, the Contractor shall arrange for an electric log to be run for the entire depth of the hole along with a gamma ray log.
4. The Engineer and Contractor shall then determine the optimum Well design, taking into account the minimum requirements as set forth herein.

C. GUARANTEE OF PRODUCTIONS:

1. After the test hole, reports and recommendations are complete, the Contractor shall guarantee to the Owner to construct and install a Well, as herein specified, which will, for the period of guarantee, furnish water as a rate of not less than 1500 U.S. Gallons per minute, and; as estimated for the existing well, shall maintain a constant above ground head of 40 pounds and when continuously operated for not longer than the time specified under the "Testing" procedures, and shall further guarantee that said Well will actually produce and deliver the said guaranteed quantity of water throughout a one year period from the date of Owner's acceptance.
2. If at any time during the one (1) year period, the Owner should test the Well and show the production is less than the guaranteed minimum, or less than the quantity paid for, then the Owner shall send written notice to the Contractor. Upon receipt of such a notice, the Contractor shall proceed promptly to do such things as he deems necessary to again bring the Well and Pump back to the original guaranteed capacity. In the event the Contractor has to abandon a Well because of geological conditions, the Contractor will notify the Engineer in writing. If the Engineer agrees, he may instruct the Contractor to move to a new site. After the Contractor has abandoned the old Well site in accordance with current rules, regulations and procedures of the Mississippi Health Department or the procedure currently being used by Mississippi Department of Environmental Quality (MDEQ), whichever is appropriate, the Contractor shall be paid for the mobilization, drilling, abandonment, and mobilization to a new site as outlined in the Contract price schedule. However, should the Contractor fail to sink the Well to the depth specified, or to such lesser depth as ordered by the Engineer, or should he abandon the Well because of loss of tools or for any other cause, he shall recover such material as he elects, properly fill the abandoned hole in accordance with current rules, regulations and procedures of the Mississippi Health Department or the Procedures currently being used by MDEQ. Contractor will not receive any compensation for the abandoned well.

D. ELECTRIC LOGGING:

The Contractor will make necessary arrangements to have an electric log, and gamma log run on the hole and the Contract shall expedite the running of this log as directed by the Engineer.

E. WELL DEPTH:

The Well shall be drilled to a depth necessary to penetrate the water-bearing sand. This depth is thought to be from 770 feet to 820 feet below the surface, but this statement concerning depth shall in no way be construed to impose any liability on the Owner or Engineer.

F. CASING:

1. Surface Casing: The Contractor may elect to use surface casing. If so, he may use whatever he wishes but no payment by the Owner will be made. He will not be required to leave the surface casing in place but the Contractor may do so at his own option.

2. Outer Casing:

The outer casing shall extend from 2 feet above the surface of the ground to the top of the water-bearing strata. The casing shall be not less than 16 inches in diameter and shall be of black steel material with a wall thickness of not less than .500 inches. The casing shall be API 5L or A53. Original Mil Certificates with matching heat numbers shall be supplied by the Contractor. The casing shall have either welded joints or screwed connections to insure against leakage from the outside sources. It shall be installed sufficiently straight so as to permit the satisfactory operation of the permanent Pump. The diameter of the hole drilled to receive the outer casing shall be large enough to leave an annular space of not less than 2-1/2 inches around the casing. The casing shall be installed with centering guides to center the casing in the drilled hole. The casing shall be cemented in place by using a pressure cementing process by starting the cement from the bottom of the hole in separate temporary pipe lines, or by the Haliburton method or equal. After the mud around the casing has been flushed out, the annular space around the entire casing for its entire length shall be filled with a high-early strength neat cement grout weighing no less than 15 pounds per gallon. After cement is in place, it shall be allowed to set and harden for at least 24 hours before drilling operations are continued. The casing shall be epoxy-coated on the inside no less than 10 mils thick with a coating approved by the Mississippi State Board of Health. The lap pipe shall be coated in and out in the same manner. The casing

supplier shall document on his stationary and signed by a principle of the company that the casing is A 53/API 5L.

G. UNDERREAMING:

After the cement has been allowed to set and harden, the underream hole shall be a minimum of 16 inches larger than the nominal screen diameter. The under ream shall extend through the entire length of the water bearing strata to be screened.

H. LAP PIPE:

The lap pipe shall extend from the top of the Well screen up into the outer casing a distance of not less than 80 feet. The lap pipe shall be of black steel, epoxy coated material, of the same size as the Well screen and standard wall thickness, and shall be A53 or API 5L. The space between the lap pipe and the casing should be filled with specially graded gravel according to the sieve analysis to prevent sand pumpage.

I. WELL SCREEN:

Into the under reamed hole shall be placed a screen, or strainer, approximately 80 feet in length. It shall be placed in the center of the large under reamed hole using guides as necessary. The screen shall be not less than 12 inches in diameter and shall be made of AISI, Type 304, and stainless steel. The openings shall be horizontal, and vertical openings will NOT be permitted. Slot opening size shall be determined from analysis of the sand from the water-bearing strata. The screen shall be as manufactured by Johnson, Houston, Cook or equal. The minimum support rod size will be .250 inches. The minimum wrap wire size will be .180 inches. The Contractor will verify with the Engineer that the proposed screen is of adequate column and collapse strength and has a transmitting capacity of 1500 G.P.M. at a 0.1 foot per second entrance velocity for the Well. The screen manufacturer shall document on their stationary that the screen meets these specifications.

J. GRAVEL ENVELOPE WELL DEVELOPMENT:

Gravel Envelope: The entire annular space between the strainer and the outside wall of the under reamed hole through the water bearing formation shall be completely filled with a graded and well rounded gravel of proper size as determined by the sand analysis to permit to free flow of water to and through the screen without Well clogging or Well sanding. The Contractor shall submit to the Engineer before graveling the gradation and type of gravel to be used. He shall also show the uniformity coefficient of the gravel in relation to the uniformity coefficient of the water bearing formation. The Owner shall have the right to accept the Contractor's recommendation or

designate to the Contractor the gradation and type of gravel to be used. The thickness of the annular gravel envelope should be between 3 inches and 8 inches to allow complete development of the well.

Well Development: The Well is to be surged and developed in insure maximum capacity and long life. This developing is to continue until the water is clear and free of sand shield it is being pumped at the guaranteed capacity. The Contractor's Hydrologist shall determine the Well efficiency using recognized methods. If the Well is less than 75% efficient at the specified pumping rate at the end of 24 hours, the Contractor shall continue development operations at his own expense to improve the Well's efficiency until it equals or exceed 75%. If the Contractor is unable to meet the 75% efficiency requirement, the Owner will reduce the payment to the Contractor by one (1%) percent of the Contract for each percentage point below 75% that is attained by the Contractor. If the Contractor does not develop a minimum of 60% Well efficiency, no payment shall be due the Contractor for the Well.

L. PROVISIONS FOR DISINFECTIONS:

1. All water used in the drilling and construction process shall be obtained from the sources or proven satisfactory quality and shall meet the primary standards of the Safe Drinking Water Act Regulations.
2. Gravel to be placed in a well should be disinfected with a solution of at least 50 mg/l free chlorine. A residual of no less than 5 parts per million of chlorine shall be maintained in any water used for development.
3. Upon completion of the well, the well and adjacent aquifer shall be disinfected as necessary using a solution of 50 mg/l free chlorine applied for 24 hours. After disinfection, the well shall be pumped until two consecutive chlorine-free samples are collected from the wells which show no coliform bacteria and no confluent growth. The samples shall be collected, submitted and analyzed according to the Mississippi State Department of Health requirements. The second sample shall be collected following at least two hours of continuous pumping after the first sample. A disinfectant must not be applied between samples. The person collecting the official microbiological sample(s) must be a representative of the Mississippi State Department of Health, the Licensed Professional Engineer for the project, or the Certified Waterworks Operator for the public water supply.
4. If water from a private well is used, microbiological samples shall be examined prior to use. Routine samples from public supplies may be used as a basis for determining if a supply is satisfactory.
5. The disinfection procedure should meet the current AWWA standard (C654). Solution strength of 50 mg/l free chlorine applied for 24 hours is recommended.

6. When a well has been repaired, such as lowering or replacing the pump, the well should be disinfected. At least two (2) microbiological water samples, taken 2 hours apart with the well pumping continuously, MUST be obtained prior to placing the well back in service. NO COLIFORM BACTERIA SHOULD BE PRESENT IN THESE SAMPLES. If coliform is present, the well should be re-disinfected and re-sampled.

M. WELL TEST:

When the Well is completed and thoroughly developed, the Contractor shall furnish, install and operate a test Pump complete with prime mover, water-level measuring device and pipe orifices for accurately measuring the pumping rate. A maximum 1500 minute aquifer test with continuous pumping shall be conducted at a constant rate of pumping at the specified Well design capacity. Measurements during the test will be made at the time intervals designated by the Engineer. After the pumping portion of the test has been completed, measurements of the recovery of the water level shall be made at the designated time intervals for an eight (8) hour period or until the water recovers to the original static water level, whichever occurs first. The Pump shall not be removed during this recovery period. The Well discharge water shall be conducted to a site as instructed by the Engineer. The Contractor shall not be responsible for the discharge water after it leaves the Owner's property.

N. CAPPING:

After development, the Well shall be capped by welding on a ¼ inch steel plate or in a manner approved by the Engineer. Before capping, it shall be sterilized by adding a fifty parts per million (50ppm) chlorine solutions for adequate sterilization.

O. EQUIPMENT:

1. Motor shall be 480 volt, 3 phases, of the vertical hollow shaft squirrel-cage induction type, and shall comply with ASA Specification C-70. The motor will be manufactured by U.S. Motors, a division of Emerson Electric. The electric motor shall also conform in construction and performance with the NEMA standards for electric motors, latest revision, and shall be rated as drip-proof; 40 degrees Centigrade rise design, with 1.15 service factor, and is weatherproof. Motor shall be of the proper size to drive the Pump continuously over the specified operating range without the load exceeding the nameplate rating. Motor shall be minimum rated horsepower so as not to be overloaded at any point of the Pump curve.

The connection between the motor and the Pump shaft shall be through a coupling of clutch of the non-reverse ratchet type in the motor head to prevent line shaft from unscrewing the event of phase reversal. A thrust bearing of ample capacity to

carry the weight of all rotating parts, plus the hydraulic thrust shall be incorporated into the meter as an integral part. The bearing shall be of such a size the average life rating is no less than five (5) years continuous operation. The motor base shall have an opening in the side for easy access to bearing covers. The motor shall be provided with an anti-reversing ratchet.

2. Pump Bowl Assembly: The Well constructed under this contract, after having been cleared of all sand and mud, shall be equipped with a deep Well water lubricated, turbine type Pump, complete with Pump column, line shafting, flanged discharge pipe connection, and all other accessories and appurtenances required for the proper operation of the equipment. The Pump shall be designed to operate at a speed not greater than 1800 rpm and to deliver not less than 1500 G.P.M. measured at the centerline of the above ground discharge outlet and a pressure of not less than 40 psi above ground for the well. The permanent pump bowls should be set to maintain a 30 foot minimum submergence after pumping for 24 hours at open discharge. The Pump Bowl Assembly shall consist of enclosed type impellers capable of producing, per impeller, the following minimum performance characteristics:

WESLEY WATER WELL

G.P.M.	HEAD/STAGE	EFFICIENCY
1600	102'	79%
1800	96'	81%
2000	89"	83.5%
2200	80'	82%
2400	70'	77%
Shutoff Head	152'	
Pump Specific Speed	2750 ffl 2%	
Minimum first stage weight 520 lbs.		
Minimum additional stage weight 200 lbs.		

3. Pumps bowls, suction and discharge cases shall be of close grained nickel aluminum bronze, ASTM 148, Alloy 958, without imperfections. Leaded red brass, tin bronze or silicone bronze will not be accepted. For Pump sizes 8 inch through 19 inch, the

bowl water passage shall be porcelain enamel coated to provide optimum performance and consistency of output. The top case bearing shall be marine type, fluted rubber cast in bronze tube. Bowls and cases shall have bronze sleeve type bushings to support and guide the shaft. Bushing material shall be bronze ASTM B-505, Alloy 836. The suction case bearing shall be grease packed with provision for grease circulation from a reservoir in the suction case hub. A sand collar or rubber or bronze, ASTM B-505, Alloy 836, shall be provided to protect the suction case bearing from abrasives in the liquid pumped. The discharge case shall have vanes to deliver the flow of water with minimum turbulence. The intermediate stages shall be selected to provide the maximum efficiency with least number of stages. Impellers shall be of the enclosed type, cast of bronze, ASTM B-148, and Alloy 953, nickel aluminum bronze accurately cast, machined, balanced, and filed for optimum performance and minimum vibration. The design shall be non-overloading for the capacity of the motor selected. The impeller shall be securely fastened to the bowl shaft with taper collets of ASTM A-582, Grade 416, and stainless steel. Bowl shaft shall be of 2-3/16" diameter to transmit the Pump horsepower with a liberal safety factor and rigidly support the impellers between the bowl -and case bearing. The bowl shaft material shall be of Stainless CR NI MN Alloy, ARMCO STEEL TN "Nitronic 50". The bowl shall be Byron Jackson Model 15 MQL. No other bowl will be considered without a letter signed by the Chief Engineer of the proposed alternative manufacturer stating that the proposed alternative Pump meets this specification in every respect.

4. Suction Pipe: Contractor shall furnish, with the Pumping unit, a 20-foot section of black steel, ASTM A-53, Grade B, suction pipe, 10-inch diameter, threaded for attaching to the Pump.
5. Column Assembly: Column pipe shall be of ASTM A53, Grade A steel pipe. Ends shall be machined with 8 threads per inch with a 1/8 inch taper and faced parallel to butt against machined shoulders in the column couplings. Intermediate sections of column shall not exceed 10 feet. Top and bottom sections of column pipe shall not exceed 5 feet. The upper end of bottom and intermediate column pipes shall be fitted with coupling of ductile iron. The coupling will have an integrally cast spider hub to hold and accurately align the shaft. Line shafts will be of ASTM A108, Grade 1045, steel ground and polished with a surface finish not to exceed 40 RMS. The shaft diameter will be a minimum of 1-15/16 inches. Each shaft shall have 304 stainless steel sleeve. Intermediate shaft sections shall be interchangeable and shall not exceed 10 feet in length. The butting ends shall be machined square to axis of the shaft and faces shall be recessed to ensure proper contact. The shaft couplings shall be threaded from solid ASTM A-276, Grad 316SS steel bars, and designed with a safety factor 1-1/2 times the shaft safety factor. Threads shall be left hand to tighten during Pump Operation. The couplings shall be without vent holes.

The discharge column shall consist of an outer pipe, line shaft, bearings, and couplings. The column pipe shall be 12 inch standard weight column conforming to ANSI B, and shall have a screw coupled connection for each 10 feet of pipe length. The couplings will be ductile iron combination couplings with alignment spiders cast integrally into each coupling.

6. **Pump Discharge Head:** A suitable Pump head of high grade cast iron ASTM A48, Class 30, shall be provided for mounting the motor and supporting the Pump column, bowls, and suction pipe. The above ground outlet shall be flanged, provided with a circular groove interfaced for square packing, and drilled to match ANSI class 125 cast iron for 150 steel flange connections. The discharge nozzle shall be constructed with a vertical vane for reduction of turbulence. Also, the discharge flange shall have a 1/4 inch NPT connection for a pressure gauge. The design shall permit the drive shaft to be coupled above the tension box to facilitate easy removal and replacement of the drive. The cast iron stuffing box shall be of the bleed off type with a bronze packing glade. A Tight Joint is required between the well casing and pump head. The Pump head shall be equipped with a separate cast iron base plate designed so as to permit the extension of the Well head casing up into the base plate at least one (1) inch. The base plate shall be grouted permanently into the concrete foundation. The Pump head shall weigh at least 750 pounds, not including the base plate and support a setting load of at least 40,000 pounds for the well.

WELL AND PUMP DATA SHEET

TEST HOLE:	Minimum 800 feet
CASING:	16" Diameter, Approximately 820 feet
SCREEN:	12" Diameter, Approximately 80 feet
UNDERREAMED HOLE:	Minimum 28" Diameter

PUMP:

1 Nominal 1500 G.P.M. at 40 psi above ground head
2 12' x 1-15/16" CS shaft w/SS couplings column Assembly required. Ductile iron column couplings Required with integrally cast spiders.

7. Discharge Pipe: The Contractor shall install, at the discharge of the Well, the fittings and accessories shown on the Well Data Sheet of Plan Detail Sheet and specified herein.
8. Gate Valves shall be AWWA, non-rising stem iron body, bronze mounted, tested to 350 psi. Valves shall open by turning counter clockwise, be equipped with "O" ring seals at the top of the stem and a hand wheel. The valves shall be Eddy-lowa, Mueller, N&H, or approved equal.
9. Check Valves shall be 125 psi rated, non-slam, as manufactured by Clayton (No. 81), Mueller, GA Industries (No. 250-D), or approved equal.
10. Pressure Gauge shall have an iron body and be calibrated in pounds per square inch in not more than 2 pound increments from zero to 50 pounds in excess of the discharge pressure. Gauge shall be equipped with a shut-off cock and be connected to the discharge pipe with ½ inch galvanized pipe.
11. Air Release Valve shall be Crispin Universal, with Protector, or approved equal.
12. Master Meter shall be Water Specialties Model ML-04 or approved equal.

B. TESTING:

When the Contractor has completed the installation of the permanent pumping equipment and has the installation ready for testing, he shall notify the Engineer. The test shall run continuously for a twenty-four (24) hour period, or a minimum of four (4) hours after the Well has stabilized. Reasonable stops for adjustment of equipment and measuring devices shall be allowed during this period. The Well and Pump shall be tested at the guaranteed capacity as measured at the centerline of the discharge flange at the specified pressure.

Hourly readings shall be recorded of the capacity and draw-down of the Well during the entire test period. A step test run from open discharge to shut off head shall be run in increments of ten (10) psi. Signed copies of the test results shall be supplied to the

Owner immediately after completion of the test. The Contractor shall furnish the necessary equipment to conduct this test.

CITY OF HATTIESBURG

WELL DATA SHEET

Outer Casing Diameter	16"; 0.500" Wall Thickness
Lap Pipe Diameter	12"
Lap Pipe Length	80'
Coating Required	Yes
Minimum Screen Diameter	12"
Minimum Screen Length	80'
Estimated Well Depth	820'
Required Discharge Flow	1500
Required Discharge Head	40 psi
Well Development (Natural or Gravel)	Gravel
Type of Pump (Line Shaft or Submersible)	L.S.
Type of Lubrication (oil or water)	Water
Discharge Fittings & Accessories	
(a) Dresser Coupling	1-12"
(b) Standard Flanged Check Valve	1-12"
(c) Standard Flanged Tee	1-12"
(d) Standard Flanged Gate Valve	1-12"
(e) Standard Flanged Cross	N/A
(f) Standard Flanged 45 Degree Ell	12"
(g) Standard Flanged 90 Degree Ell	N/A
(h) Standard Flanged D1 Pipe	12"
(i) Air Release Valve	1 – 2"
(j) Standard Hose Bid	1-3/4"
(k) Standard Pressure Gauge	1-6"
(l) Master Meter	12"
(m) Tie-In	One

DUCTILE IRON WATER SYSTEMS

1.0 GENERAL

This item shall consist of furnishing all of the necessary materials, supervision, labor, tools, equipment and incidentals, and the installation of various types and sizes of water pipe and related items in accordance with the Contract Drawings and Specifications, as stated in the Proposal.

2.0 APPLICABLE PUBLICATIONS

The following publications form a part of these Specifications and where referred to by basic designation only, are applicable to the extent indicated. The latest editions of the publications referenced shall apply to the work.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A 139 Electric-Fusion (Arc) welded steel pipe (sizes 4 inch and over).
- A 252 Welded and Seamless steel pipe piles.
- C 31 Making and Curing Concrete Compressive and Flexural Strength Test Specimens in the Field.
- C 33 Concrete Aggregates
- C 39 Test for Compressive Strength of Cylindrical Concrete Specimens.
- D 2922 Density of Soil Aggregate in place by the clear Method (shallow depths).

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- 21.10 Gray Iron and Ductile Iron Fittings, 3 inch through 48 inch for Water and other Liquids.
- 21.11 Rubber Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings.
- 21.50 Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-line Molds, for Water or other Liquids.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

C 104 Cement-Mortar Lining for Cast Iron Pipe and Fittings for Water and Other Liquids.

C 106 Cast Iron Pipe Centrifugally Cast in Metal Molds, for water and other Liquids.

C 110 Gray Iron and Ductile Iron Fittings, 3 inch through 48 inch, for Water and Other Liquids.

C 111 Rubber Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings.

C 150 Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or other Liquids.

AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS (AASHTO)

T-88 Particle Size Analysis of Soils.

T-89 Determining the Liquid Limit of Soils.

T-90 Determining the Plastic Limit and Plasticity Index of Soils.

T-99 Moisture Density Relations of Soils Using a 5.5 lb. Rammer and 12 inch Drop.

T-191 Density of Soil In-Place by the Sand-Cone Method.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Standard Specifications for Road and Bridge Construction 2004 Edition.

3.0 SUBMITTALS

The following submittals shall be required for the respective materials used in the work. All submittals shall be submitted through the Contractor to the Engineer.

3.1 Ductile Iron Pipe: The following submittals shall be required for ductile iron pipe systems utilized on the project. The Contractor shall furnish manufacturer's certificates certifying that the pipe and fittings conform to the requirements as

Specified hereinafter under Article 4.0, Materials. In addition, the submittals shall include the following:

A. Joints: The following shall be required for ductile iron joints.

1. Drawings or Manufacturer's Catalogue data indicating dimensions and tolerance.

2. Gaskets shall be tested in accordance with the respective standards as indicated in ANSI 21.11 and results shall be included in the submittals. Test shall be for similar materials on the gaskets and be not more than one year old.

3. Mechanical Joints: Should the Contractor elect to use mechanical joints in lieu of push-on joints, manufacturer's data shall be submitted in accordance with the "Special Requirements for the Mechanical Joint" as stated in ANSI 21.11 (AWWA C 111).

B. Ductile Iron Pipe Submittal Shall Include the Results of:

1. Tension Test
2. Impact Test
3. Low Temperature Impact Test

Sampling procedure shall be as indicated in ANSI 21.51.

4.0 MATERIALS

WATER SYSTEM:

A. Ductile Iron Pipe: Ductile iron pipe shall be designed in accordance with the latest revision of ANSI/AWWA C 151/A21.51), rated working pressure of 350 psi plus a 100 psi surge allowance; a 2 to 1 safety factor on the sum of working pressure plus surge pressure in Type 3 Laying condition with a depth of cover as required per plans.

Pipe shall have standard asphaltic coating on the exterior. Pipe also shall have a cement mortar lining on the interior in accordance with the latest revision of ANSI/AWWA C104/A21.4. If corrosion protection is required, polyethylene encasement shall be installed prior to the pipes installation in accordance with ANSI/AWWA C105/A21.5-88.

All non-restrained pipe shall be furnished with push-on type joints such as "Fastite; or equal. Joints shall be in accordance with the latest revision of ANSI/AWWA C111/A21.11 and shall be furnished complete with all necessary accessories.

Where restrained joint pipe is required, "Fast Grip", "Flex-Ring", or "Field Flex-Ring" or approved equal shall be used. The length of restrained pipe shall be as tabulated or noted on the plans.

Ductile iron fittings shall conform to the latest revisions of either ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53. Fittings, linings, and coatings shall be as specified for the pipe above.

All pipe, fittings and accessories shall be installed and tested in accordance with the latest revision of AWWA C600. Newly installed ductile iron water mains shall be disinfected in accordance with the latest revision of AWWA C651 prior to placing in service.

B. Gate Valves: Where indicated on the Plans or directed by the ENGINEER, the CONTRACTOR shall furnish and install gate valves as hereinafter specified.

All gate valves shall be cast iron mechanical joint, M.J., Mueller A-2380-20, equivalent or better.

All gate valves shall be furnished with O-ring packing and 2" square operating nut, AWWA 200lb., for cast iron water main.

Valve boxes shall be cast iron top and bottom. Extension pieces shall be provided as required.

All valves will be set at a perfect 90 degree angle from level pipe, (perpendicular) so as to be easily accessible through properly set valve box as per specifications above.

The CONTRACTOR shall furnish and install either a two-piece or three-piece, slip type, cast iron valve box over each gate valve. Valve boxes will be set over valve operating nut, centered so as to be easily accessible with a valve operating wrench or key. They will be set to correspond with the finished grade of street, lot, or easement. No dirt will be left in box; box will not rest directly on valve body.

C. Fittings, Valves and Hydrants, Etc.: All fittings, valves and valve boxes, hydrants, and other appurtenances are to be set at the points indicated on the plans, or as directed by the ENGINEER, and omission to do so shall be corrected by the CONTRACTOR without extra cost to the OWNER.

All fitting shall either be Ductile Iron Compact (ANSI/AWWA C153/A21.53) or Cast Iron (ANSI/AWWA-C110/A21-10) and shall have mechanical joint ends and

mechanical joint restraints (Series 1120) and shall be incorporated in the design of the follower gland and shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Flexibility of the joint shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A 536-80. Restraining devices shall be of ductile iron heat treated to a minimum hardness of 370 BHN. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSI/AWWA A21.11 and ANSI/AWWA C153/A21.53 of latest revision. Twist-off nuts shall be used to insure proper actuating of the restraining devices.

The mechanical joint restraint device shall have a working pressure of a least 250 psi with a minimum safety factor of 2:1 and shall be EBAA Iron., MEGALUG or equal.

To improve the sealing capacity, the gaskets for all mechanical joints conforming to the requirements of ANSI/AWWA C110/A21.10, C111/A21.11, or C153/A21.53 shall be of a design that causes the gasket to deflect approximately 30% during assembly of the mechanical joint. The gasket material shall conform to the requirements of ANSI/AWWA C111/A21.11, Section 1-6.4 of the latest revision. Mechanical joint gaskets shall be EBAA Iron's EBAA Seal- Improved Mechanical Joint Gasket or approved equal.

Fittings (bends, tees, plus, and caps) shall be securely braced by mechanical joint restraints, as indicated on the Plans, to prevent the possibility of blowing off under pressure. And a full length of pipe shall be installed on each end of the fitting. Then cut pieces can be installed beyond the full lengths of pipe.

D. Plugs and Caps: Where indicated on the Plans, or as directed by the ENGINEER, the CONTRACTOR shall install plugs for anticipated future extensions by placing a branch fitting (tee or cross) in the line and plugging the unused branch or branches. In general, such plugs will be located at street intersections where present plans provided lines running in only two or three directions from the intersections and where, in the opinion of the ENGINEER, a connection may be required for future extension. Where "dead end" lines are installed, the ends of such lines shall be plugged or capped as required.

For the various hot taps required according to the plans, and up to 12 inches, the JCM 432, stainless Tapping Sleeve shall be required. The CONTRACTOR shall furnish all materials for these various taps and the OWNER will actually make the tap.

E. Casing Pipe: Steel pipe utilized as casing at locations shown on the Contract Drawings shall be new round piling pipe conforming to the requirements of ASTM

A 252 or A 139. Casing diameter shall be adequate to allow pushing of the specified diameter of water pipe and make proper connections at the ends. Minimum Wall Thickness for steel casing is 0.500 inch.

F. Stabilization Material: Stabilization Material shall be a pit run mixture of sand and gravel. The sand shall be hard, sharp and durable particles. All gravel shall pass a 12" sieve.

G. Wash Gravel Bedding Material: Select Granular material for pipe bedding shall be coarse concrete aggregate. The coarse concrete aggregate shall conform to the gradation sizing Number 467 specified in Table 2 of ASTM Standard Specification C-33. (See Following Table)

<u>SIZE NO. 467</u>	
<u>Nominal Size</u> <u>(Sieves w/Square Openings)</u>	<u>Percent Passing by Weight</u>
2"	100
12"	95 - 100
3/4"	35 - 70
3/8"	10 - 30
No. 4	0 - 5

H. Select Backfill: General: The select material shall be composed of a natural or artificial mixture of sand, silt, clay or soil binder or other material of satisfactory cementing value. The sand shall be hard, sharp, and durable particles, preferably siliceous. The binder shall be a grade of clay or other material having satisfactory cementing qualities and shall be homogenous in character, free from vegetable matter, clay balls or other deleterious substances that cannot be classed as serviceable base material.

Gradation: Any coarse aggregate contained in the material shall pass the one and one-half (1-1/2), sieve and not more than thirty-five percent (35%) shall be retained in the Number 10 sieve. The plasticity index (P.I.) shall not exceed 12, nor shall the liquid limit exceed 30.

The composite selected sand-clay material passing the Number 10 sieve shall conform to the following minimum and maximum gradation limits:

<u>Sieve</u>	<u>Percent Passing by Weight</u>
Number 40	40 - 85
Number 60	30 - 70

Number 270	8 - 30
Silt (.05 to .005 mm)	3 - 15
Clay (Passing .005 mm)	3 - 15

I. Backfill: All other backfill shall consist of excavated material removed from the trench.

5.0 CONSTRUCTION:

Earthwork:

A. Site Preparation: Topsoil shall be stripped and stockpiled in accordance with Technical Specifications - Restoration of Roads, Driveways, Fences, Lawns, and other Grassed Areas and Excavation, Trenching and Backfilling.

All vegetation such as brush, heavy sod, heavy growth of grass, decayed vegetative matter, rubbish and any other unsuitable material within the area of trenching shall be stripped or otherwise removed before the trenching is started, and in no case shall such objectionable material be allowed in the trench.

Stripping operation shall be to a depth of not less than 6 inches in all cases.

B. Asphalt or Concrete Removal: Before trenching operations begin, the existing asphalt or concrete pavement shall be scored or cut to a proper depth to give a straight vertical edge when removed. The asphalt or concrete shall be disposed of offsite by the Contractor. While removing the asphalt or concrete in the trench line, never shall the adjacent asphalt be raised or pulled from its base.

C. Trenching: The Contractor shall determine all requirements for trench dimensions, alignment, and grades. The trench shall be excavated in conformance with all federal, state and local regulations for the protection of the workmen. Shoring, sheeting and/or a moveable form shall be used as required to provide earth stability during the laying operations.

The final excavation of the trench for the pipe installation shall be as indicated on the Plans. Minor variations in horizontal (within the permanent easement) or vertical alignment during construction shall be made during construction (with the Engineer's approval) to facilitate ease of installation and operation (due to potential conflicts; i.e., utility conflict) at no additional cost to the Owner except for additional piping, if any. The trench from the top of the pipe down to the bottom of the bedding shall be of a consistent width as indicated on the plans. Should the excavated width of the trench be larger than the design width, the Engineer may direct that a higher type or class of bedding be used; or other adjustments be made to increase the load carrying capacity of the pipe.

The Contractor shall not excavate more trench in advance of pipe laying than is necessary to perform the work efficiently. No more than 100 feet of open trench shall be allowed unless approved by the Engineer.

Excavated material shall be placed in a manner that will not obstruct sidewalks, driveways, or other structures. Excavated material shall not be placed so as to surcharge the walls and jeopardize trench stability.

D. Disposal: The Contractor shall satisfactorily dispose of all excess earth from excavations either in approved (by the Engineer) areas within the construction limits or away from the project in disposal sites obtained by the Contractor.

The Contractor will be permitted to mound excess earth over the trench to a maximum depth of 12 inches above the original ground surface or finished grade where the trench is located in unimproved property. Wasting of excess excavated material will not be permitted within any road ROW. All material within the construction limits shall be placed so that natural drainage is maintained and the surface shall be graded to a smooth and uniform appearance. The disposal of waste and excess excavating materials, including hauling, handling, grading, and surfacing shall be subsidiary obligation of the contractor and no separate payment will be made. Therefore, the cost of such work shall be included in the Contract Unit Price for installation of water pipe.

E. Dewatering: The site shall be kept free of surface water at all times. The Contractor shall install drainage ditches and dikes and shall perform all pumping and other work necessary to divert or remove rainfall and other accumulations of surface water from the excavations. The diversion and removal of surface water performed in a manner that will prevent the accumulation of water behind temporary structures or at any other locations within the construction area where it may be detrimental. The Contractor shall provide, install, and operate sufficient trenches, sumps, pumps, hoses, piping, well points, deep wells, etc., necessary to depress and maintain the ground water level at least one foot below the base of the excavation during all stages of construction operations. The ground water table shall be lowered in advance of excavation and maintained a minimum of one foot below the lowest excavation subgrade made until the structure has sufficient strength and weight to withstand horizontal and vertical soil and water pressures.

Where groundwater is encountered, the Contractor shall make the effort necessary to secure a dry trench bottom before laying pipe. In sandy and in other suitable type soils, dewatering shall be done by well pointing. If, in the opinion of the Engineer, the Contractor has failed to obtain an absolutely dry trench bottom

by insufficient use of all known methods of trench dewatering, the Engineer may order the Contractor to excavate below grade and place not less than 6 inches of graded crushed stone fill material over the trench bottom to form trench drains to suitably located sumps and to remove the water by bailing or pumping. The graded crushed stone fill material shall be placed at the Contractor's own expense and shall be of such depth that there shall be not water in bell holes at the time of coupling pipe. All costs of equipment, labor, and materials required for dewatering shall be included in the bid price.

F. Bedding: The Contractor shall satisfactorily shape the trench area (to specified line, grade and cross section) to receive bedding material. The bottom of the trench shall be undisturbed soil. Should the Contractor over excavate the trench without direction from the Engineer, the trench shall be brought up to grade with select backfill and compacted to at least 90% of maximum laboratory density as measured by AASHTO T 99. Such additional work and materials for over excavation without direction of the Engineer shall be at the expense of the Contractor.

Holes for the bells shall be provided at each joint in the sub-grade or in the granular fill bedding material as required. The holes shall be no larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the material. The Contractor shall install the proper bedding for the respective type of pipe and depth of installation as shown in the details and schedules on the plans. When depths vary in a particular manhole run, the Contractor shall change bedding systems in accordance with the depth installation requirements.

1. Stabilization Materials: When the sub-grade is found to be unstable or to include ashes, refuse, organic material, or other unsuitable material, the Engineer may direct that the sub-grade be over excavated to remove such material. The depths of over excavation shall be as directed by the Engineer. Stabilization material shall be placed into the over excavated area of the trench and shall be paid for in accordance with these specifications. Stabilization shall be compacted to at least 90% of maximum laboratory density in six inch lifts.

2. Bedding Materials: As detailed in the plans, bedding material shall be placed to the specified depth below the pipe and tamped to a minimum of 90% of maximum laboratory density as determined in accordance with AASHTO T 99. Following placement of pipe, additional bedding material shall be placed and consolidated under the haunches of the pipe. Special tools shall be required to work the material into place and leave no voids beneath the pipe. The bedding material shall be tamped along the spring line (or along the top of the bedding material as indicated) of the pipe to sufficiently compact the material insofar as practical.

The Engineer may direct additional moisture be added to the bedding material to aid in the compaction effort. Mechanical tampers may be employed to aid the process. Depending on the particular bedding required, additional bedding shall be added and tamped to minimum of 90% of maximum laboratory density, with AASHTO T-99.

3. Select Backfill: Select backfill shall be placed in 6 inch lifts and tamped to a minimum laboratory density with AASHTO T-99. Overall depth of the select backfill shall be as directed by the Engineer.

4. Normal Condition Bedding: Under normal conditions the trench bottom shall be undisturbed earth shaped to the specified line, grad, and cross section with proper bell holes at each joint to insure that pipe barrel lies flat on trench bottom. The bedding material will be selected native materials excavated from the trench and placed in two lifts. The first lift being placed up to the spring line of the pipe and extending out to the trench walls and hand tamped to a minimum of 90% of maximum laboratory density. Special care shall be used in placing and tamping bedding to insure no voids under the haunches of the pipe. The second lift shall extend to approximately 6" above pipe (Material permitting) and hand tamped to 90% density.

5. Backfilling: Upon completion of placement of select material the excavated materials shall be immediately placed back into the trench. Specific requirements are:

a. Backfill requirements for road crossings, parking lots, driveways, and sidewalks shall be in accordance with Technical Specifications - RESTORATION OF ROADS, DRIVEWAYS, FENCES, LAWNS AND OTHER GRASSED AREAS AND EXCAVATION, TRENCHING AND BACKFILLING.

b. Backfill requirements for unimproved areas (pastures, wooded areas) shall consist of placement and shaping of the soil in such a manner as to allow maximum natural consolidation. No compaction of the general backfill in the unimproved areas will be required, except that caused by conventional shaping equipment.

c. No debris shall be used as backfill which has a volume in excess of one-half of one cubic foot or a weight excess of 75 pounds.

6. Sheeting Removal: Wooden sheeting or other thick sheeting or shoring members which have been driven or otherwise placed along the trench walls to an elevation below the spring line of the pipe shall be cut off at the spring line or higher and left in place.

7. Grading and Grassing: Final grading and grassing shall be in accordance with the proposed Vegetation Schedule provided in the construction plans.

F. PIPE HANDLING AND STORAGE: Pipe shall be handled, staked, and stored in accordance with manufacturer's printed literature. The Contractor shall provide security as required to prevent damage by vandals. PVC pipe shall be shaded from sunlight for extended lengths of time. Pipe damaged during storage and handling shall be rejected.

G. PIPE LAYING: Each pipe shall be laid true to line and grade and in such manner as to form a close concentric joint with the adjoining pipe and to prevent sudden offsets of the flow line. As the work progresses, the interior of the water shall be cleared of all dirt and superfluous materials of every description. Where cleaning after laying is difficult because of small pipe size, a suitable swab or drag shall be kept in the pipe and pulled forward past each joint immediately after the jointing has been completed. Trenches shall be kept free of water and pipe shall not be laid when the condition of the trench or the weather is unsuitable for such work. At times when work is not in progress, open ends of pipe and fittings shall be securely and satisfactorily closed so that no trench water earth, or other substance will enter the pipe or fittings. The minimum depth of water mains shall be 30 inches below finished grade to the top of the water main.

Pipe laying shall be performed in such a manner that no foreign material enters the pipe. The Engineer may require that before lowering pipe, heavy canvas bags be placed over each end, and left in place until joints are ready to be made. If water is in the trench, the seals shall remain in place until the trench is pumped completely dry. If conditions are unsuitable, no pipe shall be laid until satisfactory laying conditions are obtained in accordance with the above specified requirements.

H. PIPE JOINTING: Piping shall be jointed in accordance with the manufacturer's printed recommendations. Gaskets shall be firmly set within the bells and grooves as required. The manufacturer's recommended lubricant or an approved equal shall be applied for slip type joints.

Ductile Iron Pipe Joint Construction: The installation and jointing of ductile iron pipe shall generally conform to the applicable provisions of AWWA Standard Specifications C-600 for pipe laying.

Where mechanical joint pipe is used, the surfaces which come in contact with the gasket shall be thoroughly brushed with a wire brush just prior to assembly. The gasket should be brushed with soapy water prior to installation to remove loose

dirt and to lubricate gasket as it is forced into its retaining space. When tightening bolts, it is essential that the gland be brought up toward the pipe flange evenly. The bolts should be partially tightened; the bottom bolt first, then the top; next the bolts on either side; and last, the remaining bolts. Overstressing of bolts to compensate for poor installation will not be permitted. Bolt torque shall be in accordance with manufacturer's specifications.

All joints of whatever type shall be completely water tight after being subjected to the required tests.

I. BORINGS: Borings shall be accomplished in accordance with Mississippi State Highway Department Standards. The contractor shall provide all necessary sheeting, bracing, cribbing, supports and appurtenances to insure the proper line and grade throughout the entire length of the crossing.

1. Casing Pipe: Casing Pipe shall be installed as indicated on the Contract Drawings. Joints shall be completely welded to provide structural integrity and shall be watertight.

2. Carrier Pipe: Carrier pipe may be any of the allowed options of piping. However, the piping and joints shall be capable of withstanding the stress exerted by pushing the pipe within the casing.

3. Carrier Pipe Supports: Supports for the carrier pipe shall be as recommended by the manufacturer for such installation. Supports shall be spaced to adequately support the piping under all conditions.

4. Casing Seal: The annulus between the casing and carrier pipe shall be sealed at each end by installing WMSON Type U end seals, as manufactured by T.D. Williamson, Inc. Tulsa, Oklahoma, or equal, in accordance with the instructions of the manufacturer of the seals.

J. Separation of Water and Sewer Mains:

1. Water mains shall be laid at least 10 feet horizontally and 18 inches vertically from any sanitary sewer or manhole. The bottom of the water line shall be a minimum of 18 inches from the top of the sewer line.

K. INCIDENTAL CONCRETE:

1. GENERAL: The following specifications shall apply to any and all items of incidental work with Portland Cement with or without reinforcement, including such items as concrete piers to support cast iron pipe above ground, erosion control bulkheads or structures, cradles and encasement, blocking and the like.

All concrete used in the construction of this project shall comply with the requirements herein specified for its particular class and kind.

2. MATERIALS: All materials used in this work shall consist of (a) Portland Cement, (b) Sand, (c) Gravel, and (d) Clean Water.

(a) The cement used shall be domestic manufacture, either "Standard" or "high Early Strength" Portland Cement, which shall meet all the requirements of the current A.S.T.M. Specifications for the type used at the time it is incorporated in the work.

(b) The fine aggregate shall consist of clean, sharp sand, well graded from coarse to fine, consisting of hard, durable particles, free from coarse to fine, consisting of hard, durable particles, free from silt, salt or organic matter. It shall meet all the requirements of the ASTM Specifications C33, Paragraph 1, 2 and 3, and ASTM C-40.

(c) The coarse aggregate used shall consist of clean washed gravel, free from particles of wood or lumps of clay. Not more than 10% shall pass the No. 4 sieve, and it shall conform with the requirements of ASTM Specifications C33, Paragraph 5 to 8 inclusive.

(d) The water used for mixing concrete shall be clear, free from oil, salt, strong acid, alkali organic matter, and shall be approved by the Engineer.

(e) Reinforcing steel shall conform to the requirements of the "Standard Specifications for Billet-Steel Concrete Reinforcing Bars" of intermediate grade (Serial Designation: A 15-39) or the Standard Specifications for Rail-Steel Concrete Reinforcement Bars (Serial Designation; A-16-35) of the American Society for Testing Materials.

3. CONSTRUCTION METHODS:

All concrete materials shall be as handled and stored that they will not become damaged after delivery at the site. The cement shall be thoroughly protected from the weather, and the sand and gravel, shall be so stored that they will not become intermixed, and so as to prevent the admixture with either of any foreign materials. Reinforcing steel shall be so stored that it will not come in contact with the ground, shall be protected from the weather, and shall be clean and free from rust when incorporated in the work.

Concrete materials shall be mixed in the proportions and in a manner that will produce concrete of the class and strength specified to its use.

Unless indicated otherwise, all concrete shall be Class A which shall have a crushing strength of not less than 3,000 pounds per square inch at 28 days, as determined by the Standard Methods for testing concrete materials.

Class B concrete, which shall have a crushing strength of not less than 2,500 pounds per square inch at 28 days, and shall be used for erosion control bulkheads and blocking pipelines at bends to prevent blowing off under pressure.

Class C concrete, which shall have a crushing strength of not less than 2,000 pounds per square inch at 28 days, shall be used for cradles and encasement and may be used for backfill below grade.

After concrete has been properly mixed, it shall be deposited in the forms in reasonably uniform layers and in such manner as to prevent segregation of the aggregates. It shall be thoroughly spaded or puddled while being placed to insure maximum density and prevent honey-combing.

No concrete shall be deposited when the air temperature is less than 40 degrees F. No material shall be deposited on a frozen sub-grade, nor shall any frozen moisture or material be incorporated into the mixture.

No concrete shall be placed in water, nor shall water be permitted to rise on it or to run over it within a period of 24 hours after it has been placed.

Unsatisfactory concrete, resulting from failure to observe the above requirements or otherwise, shall be removed and replaced as directed by the Engineer.

4. COMPENSATION:

Payment for all concrete, except as may be elsewhere herein provided, shall be included in the prices bid for the construction units with which it is placed and no separate or extra compensation will be allowed directly therefore.

6.0 TESTING

DUCTILE IRON PIPE:

A. Field Inspection: The Engineer shall perform visual inspection of the material prior to placement by the Contractor. The Engineer may make non-destructive tests to determine the soundness of the pipe. The Contractor shall assist the Engineer in handling and moving the pipe as required.

B. Material Test: Material test shall be conducted during the manufacturing

process and the results shall be included as part of the submittals. No other material test shall be required.

STEEL CASING PIPE: Material test shall be included as part of the submittal. No other material test shall be required.

COMPACTION TESTS: Compaction tests shall be performed in accordance with AASHTO T 191 or ASTM D 2922. Maximum compaction shall be determined in accordance with AASHTO T 99. Compaction tests for water pipe related work shall not be less than as follows:

(Number of Compaction Tests)

	AASHTO T-99	AASHTO T-191 or ASTM D 2922
Stabilization Material	1	One per 100 CY
Bedding Material	2	One per 600 LF
Tamped Backfill	2	One per 600 LF

HYDROSTATIC TESTING:

The completed System shall be tested as herein stated. The pipe shall be filled with water and all air exhausted. Each section shall be tested under a hydrostatic pressure of 150 pounds per square inch and shall not show leakage exceeding 10 gallons per inch of diameter per mile of pipe per 24 hours when so tested. Whatever shall be measured into a container and refilled to the pre-test level. The pressure shall be maintained for 4 hours by pumping as necessary, and if the pipe has been backfilled, a 24-hour test is required.

All visible leaks at exposed joints and all leaks evident on the surface where joints are covered shall be repaired, and leakage eliminated, regardless of total leakage shown by the tests. Lines which fail to meet tests shall be removed, if necessary, or repaired and retested until compliance with these test requirements is affected.

These tests are to be made at the Contractor's expense, and he is to provide all necessary fittings, equipment, appliances, and any other necessary items to conduct the tests in a manner satisfactory to the Engineer. All costs incidental to conducting these tests are to be included in the prices bid for the various items of construction as no separate or extra compensation is to be allowed therefore.

CLEANING AND DISINFECTION:

Before each section of work is placed in service, it shall be thoroughly flushed to remove any dirt or other foreign material from inside the lines; and the inside of the lines shall be disinfected by pumping into and through them a solution of chlorine of 50mg/l for 24 hours in such manner as to meet the requirements of the State Board of Health.

At least two (2) samples of chlorine free water, taken from each section shall be submitted to the State Board of Health for examination to determine if the system is free from organisms of the Coli-Aerogenes group. If such samples are not negative from organisms of the Coli-Aerogenes group, the system shall be disinfected and re-disinfected in a manner meeting the requirements of the State Board of Health, until the system is freed of contamination.

All water mains will be flushed, chlorinated and re-chlorinated until two (2) consecutive negative water samples are obtained by the Local Health Department or a representative of the water systems certified as an operator by the Mississippi Department of Health.

The CONTRACTOR shall be responsible for the conduct of all of the above defined activities, and any and all costs incident thereto shall be included in the prices bid for the various items of construction as no separate or extra compensation is to be allowed therefore.

EXISTING DRINKING WATER FACILITIES

The Contractor is required to keep existing drinking water facilities in operation during construction. Should the Contractor require that existing facilities be taken out of operation, a plan to provide for alternative service shall be reviewed and approved in advance by the Health Department and shall be adhered to during construction.

SPECIFICATIONS FOR NEW WELL CONTROLS

SECTION 16050

PART 1 - BASIC ELECTRICAL MATERIALS AND METHODS

- 1.01 ELECTRICAL SPECIFICATIONS: The electric supply is existing. The Contractor shall contact the power company prior to bidding and include in his bid the cost of labor and material necessary to supply the plant with electricity, including any cost which may be assessed by the power company for installation of power company furnished material. The Contractor shall coordinate all aspects of the construction concerning the electric service with the power company. The Approval Drawings shall include all details of the power company electric service and all associated equipment (to include all pole types and locations, switches, fuses, wire sizes and types, etc.) anywhere on the plant property.
- 1.02 TEMPORARY ELECTRIC SERVICE: The Temporary Electric Service for construction power shall be furnished, installed, and removed by the electrical contractor. Also, Contractor, shall make all necessary arrangements with the power company for metering and billing and provide for these charges and cost in his bid.
- 1.03 TESTING AND INSPECTIONS: Contractor shall assist in making periodic inspections or tests as required by the Engineer. When required, Contractor shall provide the assistance of foreman and qualified craftsmen for reasonable duration of each test, etc. Cooperate with other Contractors in preventing premature operation of equipment like water process equipment, etc., which should be first run in presence of personnel responsible for each item.
- After wiring is completed, the Contractor shall test for shorts and open circuits, intentional and unintentional grounds. All shorts, open circuits, and unintentional grounds shall be corrected.
- 1.04 GUARANTEE: Workmanship and materials shall be guaranteed for period of one year from date of official acceptance of contract. Be responsible for any adjustments, replacements and corrections necessary to restore project to first-class condition if deficiency is due to faulty workmanship or materials.
- 1.05 CONDUIT SYSTEMS: Use galvanized or sheradized steel conduit in damp locations, exterior walls, exposed out of doors or when subject to

mechanical damage after installation. Underground runs, use PVC, schedule 80 incased in concrete per NEMA standards and buried at required depth per NEMA standards. Provide electrical line red warning tape buried six (6) inches above conduit run. Protect conduits against entry of debris; keep ends capped during construction; clear or replace obstructed conduits.

Size and install conduits so that conductors may be installed without damage or excessive strain, using NEC as a minimum standard. For rigid conduit use double lock nut and bushings. For conduits larger than 1", use grounding type insulation bushing. Entire conduit system shall provide a dependable path to ground. EMT fittings shall be watertight type, T&B 5100 series. Crimped or set screw types are not acceptable.

Ream ends after threading, make bends with an approved bending tool. Replace deformed bends or off-sets. Avoid hot water pipes, stay at least 3" from covering of hot pipes except as crossing, then at least 1".

- 1.06 PULL BOXES AND JUNCTION BOXES: Pull boxes shall be code gauge and size galvanized steel and shall be installed where accessible and in location shown on the drawings or where required to facilitate the easy pulling of wires. Boxes shall be sized properly for the conduits and wires entering them. In outdoor and process areas use weatherproof and corrosion resistant boxes.
- 1.07 OUTLET BOXES: On exposed conduit in process areas, use Crouse-Hinds No. FS or FD or other galvanized steel types. All boxes galvanized, or cadmium plated, or better.
- 1.08 CONDUCTORS AND GENERAL WIRING METHODS: Type THW 600-volt copper wire for general use and types THHN 600-volt copper for High Ambient Temperature; where Contractor sizes conduit based on conductor required, basis is type THW. Approved manufacturers, Triangle, General Cable, Collyer, National Electric Products, or approved equal. Size, type and trade name stamped permanently at regular intervals on all conductors. All wire shall be color coded.

Install wire in conduit after all work which may cause damage is completed. Powdered talc or other approved compound may be used as lubricant where necessary.

Make joints and splices in conductors with approved insulating type compression fittings, T&B, Sta-kon, or Buchanan splice caps. Wire-nuts are not acceptable.

1.09 GROUNDING AND BONDING REQUIREMENTS

In order to provide a safe and reliable system, all structures, piping, equipment and electrical services involved must be properly grounded and bonded to a properly sized and installed grounding electrode system.

All work will comply with every facet of the National Electric Code Article 250, current edition. Particular attention must be given to sections 250.56 and 250.58.

The article 250 requirement for a ground resistance of 25 ohms or less shall be considered as the minimum and a resistance of 4 ohms or less shall be the goal. This resistance will be measured with equipment using a three point resistance measurement and "fall of potential" system.

Ground and elevated water tanks are a major source of danger and damage due to lightning and transient voltages. Because of this, these structures will have as a minimum, a ground ring completely around the structure consisting of #2/0 bare copper wire and 10 foot long by 3/4" diameter copper clad ground rods. The rods shall be spaced no more than 12 feet apart. There will be at least 4 radials to the tank legs or structure. All connections will be exothermic (Cadweld) performed by qualified personnel. All devices located at these tanks will be bonded to the ring.

Other structures will have a grounding system appropriate for the location per the National Electric Code article 250.

Conduit work, motors, panel boards and electrical equipment are to be effectively and permanently grounded. Feeder conduits shall provide a good path to system ground.

The grounding screw on all grounding type receptacles shall be securely grounded to the outlet box with lug and screw, or use self-grounding types.

Verify electrical continuity of all conduit runs and correct any discrepancies.

The Contractor shall be responsible for determining the extent of grounding and bonding requirements for equipment located at the site(s) covered under the contract(s) as listed herein. The Contractor shall provide for these charges, and cost in his bid.

1.10 EXCAVATION AND BACKFILLING: Excavate trenches for underground conduit or cable to required depth and width. After conduit of cable has

been installed, inspected, and approved, backfill trench with earth free of trash, rock, brick and debris, and compact as required. Under slab, follow compaction rules for general work on this project. Underground workmanship applies under slab; depth can be reduced, but provide full and complete encasement. Bond conduit to any membrane passed through.

- 1.11 CLEANING: As required, clean all equipment or exposed material provided or installed under this section. Protect from any normal use of paint, mortar, etc.
- 1.12 WORKMANSHIP: All work shall be done in a thorough, substantial, and workmanlike manner by competent workmen. Applicable rules of National Electric Code apply as minimum standard for this contract but do not replace or reduce any specific requirement herein.
- 1.13 INTERFERENCES: The drawings are generally diagrammatic. Cooperate with other trades so that interferences of conduit, equipment, piping, etc., will be avoided. If interference develops, refer promptly to Engineer for decision.
- 1.14 EXISTING MOTOR CONTROL CENTER: The new motor control center section shall be attached to the existing plant motor control center via extension of the horizontal bus and ground bus. The contractor shall take all necessary precautions to prevent any cosmetic, structural, electrical, or functional damage to the existing structure.

END OF SECTION

SECTION 16900

MOTOR CONTROL CENTER SPECIFICATIONS

PART 1 – GENERAL

- 1.01 MOTOR CONTROL CENTER SPECIFICATIONS
 - A. Multi Unit Motor Control Center where and as shown on the drawings and as herein specified.
 - B. Acceptable Manufacturers shall be Control Systems, Inc., Jackson, MS; Allen Bradley, Cutler Hammer or Square D Company and shall be compatible with the existing MCC structure.

- C. Control Center shall be of the NEMA enclosure type and NEMA wiring type as listed below:

1. Enclosure Type

NEMA 12 Polyurethane gasketed freestanding enclosure.

2. NEMA Wiring Type

Class II, Type B – All necessary wiring between modules shall be furnished. All wires, both power and control, shall be wired to pull-apart terminal blocks within the module for easy module removal. The terminal block shall be angled to aid installation of external wiring. All power and control wires shall be marked at both ends using self-adhering wire markers. No two wires having different functions within the motor control center shall have the same markings. Furnish a drawing for each module showing its individual power and control wire numbers and terminals. Also, furnish a motor control center physical power and control terminals layout showing each individual module terminal numbers.

- D. Control center shall consist of formed galvanized steel vertical sections bolted together to form a rigid freestanding assembly. Each control unit shall be simulated with galvanized steel barriers and shall have black Bakelite nameplate engraved with white letters indicating name of load served, circuit number, and equipment identification number. Each section shall be ninety (90) inches high, twenty (20) or thirty (30) inches wide, and a minimum of twenty (20) inches deep. Each section shall have a four (4) inch vertical wiring gutter. Two sections sharing the same vertical wiring gutter will not be acceptable. There shall be a maximum of six (6) modules in the front and five in the rear of any one vertical section. Only one (1) combination starter shall be installed in each module. In addition, top and rear plates must be screw removable. Riveted plates will not be allowed.
- E. All bus bars shall be electrical grade copper completely tin-plated and braced to withstand 42,000 Amperes RMS symmetrical. Vertical bus bars shall be rated 300 Amperes minimum. Provide a grounded steel plate barrier to isolate the vertical bus. Vertical bus risers must end twelve (12) inches above floor level to allow ample conduit space and bending room for cables. Provide snap-in PVC inserts to cover stab openings not being utilized. Provide removable metal barriers over horizontal power bus. High quality non-tracking insulators shall support bus bars. Provide horizontal copper ground bus the entire length of the motor control center.
- F. Each starter unit shall be combination type, with molded case magnetic only motor circuit protector circuit breakers quickmake/quickbreak, and

starters of sizes and types indicated on the drawings. Overload relay thermal units shall be properly sized to actual motor nameplates amperes, and each starter shall have three (3) overload elements and be ambient compensated with alarm contact.

- G. All starter coils shall be 120 volts supplied from individual control transformers in the motor control center starters. Starters shall have extra normal open or normal closed interlocks as required for controls.
- H. The Motor Control Center manufacturer shall furnish eight copies of approval drawings in a Bound Booklet Form 8.5" x 11". No sheet shall be larger than 8.5" x 11". Folded larger sheets will not be acceptable. The drawings shall contain a table of contents consisting of the following information.

1. Motor Control Center information sheet with following information.

- a. Starter nameplate identification and unit location within motor control center.
- b. Type of magnetic starter and NEMA size rating.
- c. Horsepower, service factor, RPM, and full load amperes of motor.
- d. Frame size, interrupting capacity, rating, and trip amperes of all circuit breakers.

2. Motor Control Center layout and specifications sheet with following information.

- a. Complete physical layout of motor control center.
- b. General specifications covering enclosure NEMA type, supply voltage, incoming cable size, main breaker information, bussing size, material, bracing and plating, ground bus information, neutral bus information if required, NEMA class and type wiring, type of combination starter, and terminal block information if required.

3. Individual unit's power and control diagrams with following information.

- a. Complete power and control diagrams on each individual unit. All power and control wires shall be marked at both ends using self-adhering wire markers. No two wires having different functions within the motor control center shall have the same wire markings. Standard unit drawings having same wire numbers will not be accepted.

4. Overall one line power diagram of the complete motor control center including following information.
 - a. Entrance cable size
 - b. Main breaker location and size
 - c. Metering section one line diagram, if required
 - d. Main bus size and type
 - e. Each individual unit's information including circuit breaker trip size, starter size and type, distribution transformer complete information, and distribution panel complete information.
 - f. Remote feeder items information horsepower, name identification, and proper cable sizes to feed remote devices.
5. Power terminal layout sheet with following information.
 - a. Complete overall motor control center physical layout showing each individual unit and that unit's individual power terminals and wire numbers.
 - b. Complete power wiring inter-unit connection information.
6. Control terminal layout sheet with following information.
 - a. Complete overall motor control center physical layout showing each individual unit and that unit's individual control terminals and wire numbers.
 - b. Complete control wiring inter-unit connection information.
7. Complete motor control center instruction and installation manual.
8. All approval drawings shall be prepared per Joint Industrial Conference (J.I.C.) standards for engineers review **prior to any fabrication** of control equipment. The motor control center shall have an Underwriters Laboratories, Inc. (UL) label, and proof of label availability shall be submitted with above drawings.
9. The motor control center manufacturer shall provide a written warranty with approval drawings covering all motor control center materials and parts furnished for a period ending one year after final acceptance of the project. This warranty shall cover all material replacement, all labor, and all travel expenses.

END OF SECTION

SECTION 16940

PROCESS INSTRUMENTATION AND CONTROL

PART 1 – GENERAL

1.01 WORK INCLUDED

The work covered under this section of the specifications includes the furnishing and installing of all instrumentation and control hereinafter specified to perform the intended function. The proposed additional well shall be incorporated into the Owner's existing SCADA (Supervisory Control and Data Acquisition)/Telemetry system. All data signals, alarms, and functions shall be transmitted to the City of Hattiesburg's existing SCADA system via VHF radio communication, utilizing the Owner's existing radio frequency. All data shall be incorporated into the Existing Office Central Telemetry Unit (CTU) to provide the operator with graphical interface, monitoring and control as well as provide records of appropriate system transactions. The Contractor shall coordinate all SCADA programming with the Owner, The City of Hattiesburg, and the Project Engineer. All equipment provided shall be compatible with existing SCADA equipment. All programming modifications to the Owner's existing SCADA system shall be provided.

1.02 RELATED WORK

Section 16050 – Basic Materials and Methods

Section 16900 – Motor Control Centers

PART 2 – PRODUCTS

2.01 SYSTEM SUPPLIER

- A. All instrumentation and control systems equipment shall be furnished by a System Supplier. The System Supplier shall provide and be responsible for the proper operation of all Process Instrumentation and Controls and Control Panels. The System Supplier shall perform in house submittal drawings and assembly of products. Subcontracting submittal drawings and equipment assembly will not be permitted.
- B. Substitutions of functions or equipment specified will not be acceptable.
- C. The entire system shall be warranted for one year from date of substantial completion.
- D. The Contractor shall assign full responsibility for the function operation of

all new instrumentation and control systems to a System Supplier. This System Supplier shall be responsible for all coordination necessary in order to select, to furnish, to supervise installation and connections, to calibrate, and to place into operation all instrumentation and controls along with all other equipment and accessories as specified herein. The System Supplier shall be a licensed electrical contractor in the state of Mississippi.

- E. The System Supplier shall be one of established favorable reputation who has designed and produced similar systems and components for a period of at least (10) ten years.
- F. It shall be required of the System Supplier to execute and submit a guarantee to assume full responsibility as defined in Section 2.01, paragraph 'A' above.
- G. The written guarantee shall be on the named System Supplier's letterhead and shall be signed by a responsible representative who will be primarily involved in the fulfillment of this guarantee. The written guarantee shall be stated as follows:

"... (Name of Single Source System Supplier)...guarantees that the proposal offered provides for complete compliance with all requirements of this section of the project specifications without exceptions to these specifications.

Full responsibility will be placed upon... (Name of Single Source System Supplier)...for all coordination necessary to select, to furnish, to supervise installation and connections, to calibrate, and to place into operation Process Instrumentation and Controls, Control Panels, and all other equipment and accessories needed to provide a complete operating system to comply with requirements of this section of the project specifications.

... (Name of Single Source System Supplier)... guarantees to provide all submittal drawings, instruction manuals, and qualified personnel for specified field services and training, all as defined within this section of the project specifications."

... (Name of Single Source System Supplier)... is a licensed electrical contractor in the state of Mississippi; Certificate of Responsibility No. _____, name of qualifying party_____;

Guarantee on system function and equipment shall be one (1) year from date of substantial completion or partial acceptance.

2.02 SUBMITTAL DRAWINGS

A. Descriptive literature and drawings for equipment and systems being furnished under this section shall be included in two submittals as a maximum. If two submittals are made, the first shall include all primary devices, transmitters, sensors, and field mounted equipment. The second submittal will include the balance of the submittal required. The submittal shall include as a minimum, equipment specifications, dimensional drawings, flow and other calculations, schematic drawings of each and every system within the complete offering, and such other information requested by the Engineer or considered necessary to the proper installation of the equipment. Furnish submittals in a Bound Booklet Form 8.5" X 11". No sheets shall be larger than 8.5" X 11". Foldout larger sheets will not be acceptable. This submittal shall include coordinated information and drawings for all items that the Single Source System Supplier is required to furnish under this section of the specifications, all in one integrated and coordinated manual. Each item of a submittal shall carry the appropriate title and be indexed against the appropriate specification item.

B. A quantity of eight (8) sets of submittals shall be furnished for the Engineer's approval.

2.03 INSTRUCTION MANUALS

Prior to 65% of the value of job completion, System Supplier shall furnish two (2) copies to the Engineer and one (1) copy to the Owner of all descriptive matter and complete system operation instruction manuals in separate indexed binders coordinated with the equipment that is furnished and installed for approval. System Supplier shall incorporate Engineer's comments and resubmit for approval within thirty (30) days of receipt of Engineer's comments. Once final approval is obtained, System Supplier shall furnish two (2) copies to the Owner and two (2) to the Engineer.

2.04 RELATED SYSTEM COMPONENTS

The attention of the System Supplier is called to sections concerned with electrical work, chemical feeders, valves, piping, etc., and such other devices not specified under this section, but related to it.

PART 3 – EXECUTION

3.01 TESTING

A. The controls and motor control centers shall have been factory tested in a

high-power Underwriters Laboratories, Inc. (U.L.) 508 listed laboratory to prove adequate mechanical and electrical capabilities. Proof of label availability shall be submitted with approval drawings. All factory tests shall be completed by a qualified factory-trained representative with a minimum of fifteen (15) years of experience. Factory testing shall consist of, but not limited to the following:

1. Verify proper voltage on motor control center horizontal and vertical busses.
 2. Circuit breakers shall be tested one at a time in sequential order.
 3. All motor contactors shall be manually tested, one at a time.
 4. Phase-to-phase voltages shall be verified at each starter.
 5. Verify proper voltage on the secondary (motor) side of each contactor.
 6. Calibrate all timers and dipswitches, if applicable.
 7. Test and verify all Variable Frequency Drives (VFD) and Solid State Starters (SSS) with a test motor and verify the proper rotation of the motor.
 8. Calibrate/Setup all preliminary VFD and SSS parameters for specific job application.
 9. Simulate and verify all motor "call for", digital and/or analog, inputs and outputs.
 10. Calibrate all Level, Pressure and Flow controllers.
 11. Simulate Inputs from remote equipment (if applicable).
 12. Verify outputs to remote equipment (if applicable).
 13. Verify proper torque on all terminals and/or lugs.
- B. Provide adequate field testing of the motor control centers and controls by a qualified factory-trained manufacturer's representative with a minimum of fifteen (15) years of experience. Field testing shall consist of, but not limited to the following:
1. Verify proper installation of motor control centers, control panels and all conduits.
 2. Verify proper grounding of motor control centers and control panels. All work will comply with every facet of the National Electric Code Article 250, current edition. Particular attention must be given to sections 250.56 and 250.58.
 3. Verify proper torque on all terminals and/or lugs.
 4. Verify proper connection of power and control wiring.
 5. Verify proper operation of automatic controls.
 6. Verify Analog/Discrete I/O signals transmitted to remote panels (if applicable).
 7. Calibrate timers/dipswitches.

8. Calibrate level and pressure control devices.

3.02 ENGINEERING SUPERVISION

- 7.01 The services of a qualified representative of the selected Single Source System Supplier shall be provided to inspect the completed installation, suggest all adjustments necessary to place the system in proper operation, and instruct operating personnel in the care and operation of the equipment furnished. A minimum of one (1) day and one (1) trip start-up service and training operating personnel shall be included. The services shall be furnished by the Contractor as a part of the work included under this section of the specifications.
- 7.02 The System Supplier shall show satisfactory evidence that he maintains, a fully equipped factory organization capable of furnishing adequate service for the equipment furnished, included replacement parts. Suppliers employing outside organizations for "ON CALL" service shall not be considered.

3.02 GENERAL INSTALLATION

- A. Installation of instrumentation and controls shall be in strict compliance with the manufacturer's instruction. The locations of these items as shown on the Contract Drawings are approximate only. Exact locations shall be as approved by the Engineer during construction. It is the duty of the Contractor to obtain, in the field, all relevant information required for proper placement of instrumentation and controls. In the case of interference with other work, proceed as instructed by the Engineer and provide all materials and labor required to prevent construction delays.
- B. Execution of the installation shall be in full accordance with codes and local rulings. The Contractor shall be responsible for any expenses that are a result of work performed contrary to said codes and regulations.
- C. The System Supplier shall coordinate with the Contractor the installation, the location of process equipment, and connections of process equipment to related equipment panels, subject to the Engineer's approval. The equipment being furnished with electrical controls or instrumentation must be submitted to the System Supplier for approval and coordination with all other control and instrumentation on this project. This engineer will not approve any equipment submittal until this coordination has been accomplished.

- D. The new MCC section shall be connected to the existing Plant MCC via bus splice kits for both the horizontal bus and ground bus. No wire connections shall be allowed. The MCC is specified to be braced for 42,000 Amperes RMS symmetrical. The contractor shall confirm the rating of the existing MCC and the new section shall be provided with the equivalent rating.

3.03 SPARE PARTS

- A. Provide the following spare parts packaged for long-term storage and delivered to the owner.

<u>QTY.</u>	<u>MODEL NO.</u>	<u>DESCRIPTION</u>
1	SWC	Simplex Well Controller
1	MM	Motor Monitor
1	LF	Analog Line Filter

- B. The System Supplier shall maintain an inventory at his facility of at least one (1) part of each type furnished on this project. These parts shall be available for delivery to the owner in a maximum of twenty-four (24) hours.

3.04 WELL MOTOR CONTROL CENTER MISCELLANEOUS CONTROLS

- A. The Motor Control Center (MCC) shall be designed for 277/480 volt, 3 phase, 4 wire power. The contractor shall confirm the operating voltage.
- B. WELL: Provide a combination circuit breaker and Solid State Starter (SSS), per Component Specifications, for the Well. The Solid State Starter shall come complete with a shorting contactor and overload protection. The reduced voltage soft start starter shall be Allen Bradley model SMC, Siemens model SIKOSTART, or approved equal. In addition, provide the following additional equipment and controls for the Well.
1. Provide a Duplex Well Controller (DWC-1), per Component Specifications. In the automatic mode, the Duplex Well Controller shall receive start and stop commands from the existing Clearwell Level Meter/Controller. Make all control modifications necessary to accommodate the new well into the existing control system.
 2. Additionally provide controls to operate one well at one time in both the automatic and manual modes of operation.
 3. Provide a well maximum run timer that will automatically alternate the

wells based upon maximum time.

4. The existing well Simplex Controller shall be removed from the existing MCC control section and replaced with an anodized aluminum deadfront blank. The existing well Backspin Timer shall be reused.
 5. Provide a field adjustable well Backspin Timer (BST) for the well, per Component Specifications. The timer shall prevent the restarting of the well without a field adjustable time delay.
 6. Provide a Motor Monitor (MM-1) complete with Current Transformer, both per Component Specifications. The motor monitor shall provide a positive run signal, monitor proper motor running conditions, indicate motor running time, and motor full load running amperes. In addition, motor monitor shall come complete with high or low amperes set point for the well. The well motor current shall be transferred to the existing CTU and displayed on the system computer.
- C. REMOTE TELEMETRY UNIT: Provide the following signals to the existing Remote Telemetry Unit (RTU).

Analog Inputs:

1. Well Motor Current
2. Well Flow

Digital Inputs:

1. Well Running
2. Well Failure
3. Well Selector Switch in Auto

Digital Output:

1. Well Force On
2. Well Force Off

- D. CHEMICAL FEED SYSTEMS: Modify the chemical feed systems to accommodate the new local well. Confirm proper operation of chemical feed systems in both the manual and automatic modes of operation.

PART 4 - FIELD INSTRUMENTATION AND EQUIPMENT MODIFICATIONS

- 4.01 WELL DISCHARGE FLOWMETER: Provide properly sized Well Discharge Flowmeter (FM), per Component Specifications. Flowmeter to be furnished and installed by System Supplier.

- 4.02 SCADA SYSTEM AND CENTRAL COMPUTER MODIFICATIONS: Necessary modifications shall be made to the existing City of Hattiesburg SCADA system and central computer equipment to incorporate the new well at the treatment plant site. All data shall be incorporated into the existing CTU to provide the operator with graphical interface and monitoring as well as provide records of appropriate system transactions. The control system supplier shall be responsible for coordinating all work with the City of Hattiesburg, project Engineer and existing SCADA system supplier.

PART 6 – COMPONENT SPECIFICATIONS

- 6.01 Three-Phase Motor Current Monitor: Provide a 3-phase motor current monitor (converter) to input motor current into an RTU with '1-Wire' communications protocol. The converter shall be capable of measuring the current on each phase using inputs from three (3) separate 5-amp Current Transformers. The converter shall include true RMS (Root Means Square) conversion on each input for the most accuracy. The converter shall be capable of either SnapTrack or backplate mounting and be powered by and external +12V DC power supply. The converter shall include a "Power On" LED. Provide quick-disconnect connectors with capture-type terminals. Spring-clip type terminals shall not be accepted.

TAG

3CT-GEN

SERVICE

Emergency Generator Current Monitor

- 6.02 SOLID STATE STARTER: Provide a solid-state starter, including the following features for each pump.

A. GENERAL

This specification describes the requirements for a solid-state motor controller to provide voltage ramp soft starting of a standard AC induction motor. These controllers shall provide a superior alternative to other types of reduced voltage starting such as autotransformer, wye-delta, primary resistor, and part winding. Provide smooth stepless acceleration, reduced inrush current, smaller physical size, and higher duty cycle capability.

B. QUALIFICATIONS

1. Manufacturer

- a. The manufacturer shall have a minimum of 15 years experience in the manufacturer of solid state reduced voltage controllers.
- b. The approved manufacturers are:

2. Support

- a. The manufacturer shall maintain factory trained and authorized service facilities within 100 miles of the project and shall have a demonstrated record of service for at least the previous ten years.
- b. Support personnel are to be direct employees of the manufacturer.

3. Certification

- a. To insure all quality and corrective action procedures are documented and implemented all manufacturing locations shall be certified to the ISO-9001 Series of Quality Standards.
- b. Third party manufacturers and brand labeling shall not be allowed.

C. REFERENCES

1. The controller shall be designed to meet the applicable requirements of:

- a. EN
- b. IEC
- c. cULus
- d. NEMA
- e. IEEE
- f. VDE

2. These standards shall include:

- a. Creep distances and clearances 600V (UL/CSA) and 500V (IEC)
- b. Power terminal markings per EN 50005 and EN 60947
- c. Dielectric withstand per UL508 and IEC947
- d. Noise and radio frequency (RF) immunity per NEMA ICSA1-109
- e. Surge withstand per IEEE587 and IEC 801-5

D. WARRANTY

The manufacturer shall provide their standard parts warranty for twelve (12) months from the date of purchase.

E. RATINGS

- 1. The solid state reduced voltage controller shall accept an input

voltage of 480 VAC, three phase plus or minus 10 percent

2. Environmental Ratings

- a. Storage ambient temperature range: -20 to 75 degrees C.
- b. Operating ambient temperature range: 0 to 50 degrees C.
- c. The relative humidity range: 5% to 95% non-condensing.
- d. Operating elevation: up to 2000 Meters.

3. Definitions

- a. The Solid State Reduced Voltage Controller Unit shall refer to the actual controller unit that will be mounted within the specified enclosure.
- b. The Solid State Reduced Voltage Controller System shall refer to the controller unit and all items specified under Controller System Options.

F. SOLID STATE REDUCED VOLTAGE CONTROLLER UNIT DESIGN

- 1. The open-type controller device shall be modular, consisting of a power structure and a logic component.

2. Power Structure

- a. The power structure shall include an SCR bypass.
- b. The power structure shall include a built-in overload.
- c. There shall be a CT on each phase of the device for current measurements.
- d. For ratings 1 Amps to 480 Amps. SCRs shall have the following minimum repetitive peak inverse voltage ratings.
 - i. 1400V for units rated 200 to 480V
 - ii. 1600V for units rated 200 to 600V

3. Logic Component

- a. The logic component shall be an integral part of the power structure so it can not be removed an misplaced
- b. The control module shall provide digital microprocessor control and supervision of all controller operation, including pulse firing of the SCRs.
- c. The control module shall consist of the following.
 - i. Self-tuning power supply accepting control power input from 100 to 240 VAC or 24V AC/DC, 50/60 Hz.
 - ii. Logic control circuitry incorporating a latch circuit for three-wire control.
 - iii. Input / output circuitry
 - iv. Dipswitches are to be used for secure setting of the

- v. setup parameters.
A POT setting is to be used for setting up the motor FLA.
- d. The control terminals shall be easily accessible and located on the front top of the device. The terminals shall be UL rated for 300 Volts and accept a maximum of two wires rated number 24 to number 14 AWG.

G. CONTROLLER UNIT FEATURES

- 1. Starting Modes: The controller shall provide the following starting modes as standard.
 - a. Soft Start with Selectable Kickstart
 - i. Programmable initial torque value of 15 to 65 percent of locked rotor torque
 - ii. Programmable acceleration ramp time from 0 to 30 seconds
 - iii. A selectable kickstart, or boost, shall be provided at the beginning of the voltage ramp. The kickstart shall provide a current pulse of 450 percent of the full load current. The kickstart time shall be adjustable from 0 to 1.5 seconds.
 - b. Current Limit Start
 - i. Provides means of limiting the maximum starting current
 - ii. Programmable for 150 to 450 percent of full load current
 - c. Soft Stop
 - i. The Soft Stop option shall provide a voltage ramp-down for an extended motor stopping time.
 - ii. Soft Stop shall be initiated by a Stop input. A coast-to-rest stop shall still be possible with a separate stop input.
 - iii. Programmable voltage ramp down time from 100 to 300 percent of the start time selected.
 - iv. The load shall stop when the motor voltage drops to a point where the load torque is greater than the motor torque.
- 2. Overload Protection
 - a. Shall meet applicable standards as a motor thermal protective device.

- b. Shall utilize three-phase current sensing. The use of two current transformers shall be unacceptable.
 - c. Selectable trip classes of 10, 15, and 20 shall be provided as standard.
 - d. Electronic thermal memory shall provide enhanced motor protection.
3. Digital I/O
- a. A minimum of two configurable auxiliary contacts and one fault auxiliary contact shall be provided for customer use.
 - b. The contacts shall be rated for 240 Volts AC maximum. Contact configuration shall contain:

Aux1	NO	Normal/Up-to-Speed
Aux2	NO/NC	Normal/Up-to-Speed
Fault Aux	NO	Fault
4. Protection and Diagnostics
- a. The following protection shall be provided as standard with the controller.
 - i. Pre-start line fault advising of shorted SCR, missing load connection or phase reversal
 - ii. Running line fault advising power loss, shorted SCR or phase imbalance.
 - iii. Overtemperature
 - b. The Overload is the only defeatable protection provided as standard with the controller.
 - c. When fault conditions are detected, the controller shall inhibit starting or shut down SCR pulse firing.
 - d. An auxiliary contact that is programmable for fault indication shall be provided for customer use.

TAG
200 HP SSS

SERVICE
Well Solid State Starter

DUPLEX WELL CONTROLLER: Provide a duplex controller to control two wells that includes the following control functions:

- A. OPERATORS AND INDICATORS (for each well)
- 1. Manual-Off-Automatic selector switch
 - 2. Green "Well Running" pilot light
 - 3. Red "Well Failure" pilot light

- B. A Well NO.1 LEAD – ALTERNATE – Well NO.2 LEAD sequence selector switch to select either well as Lead well or to select that the motors alternate as Lead well on each call for cycle.
- C. Signal inputs for: Stop, Lead Well Start, Lag Well Start, and a Low Level Alarm. The sensors shall be optically isolated and operate on 12VDC with a maximum current of 12 mA for intrinsic safety.
- D. Pilot light indicators for each level control input, which includes Start and Stop levels and Running inputs for each well along with a low level alarm.
- E. A field adjustable failure time delay for each well in the range of five (5) seconds to six and a half (6.2) minutes to start the Lag well at the Lead well start point if the Lead well fails or if the Lead well selector switch is placed in the off position. If a well fails, the remaining functional well shall remain the Lead well on future cycles. The failed well shall only be called to operate at the Lag well operating point. Normal well alternation shall resume when failure condition is corrected and well has been reset.
- F. Soft stop feature to require the motors to stop three (3) seconds apart during the condition that both motors are running when signaled to stop. Soft start feature to require the motors to start three (3) seconds apart during conditions that the Lead and Lag motors are called for simultaneously.
- G. Individual field adjustable time controls to delay starting each well in the automatic mode after power failure or during initial startup.
- H. Well failure, well seal failure, and low-level alarm red pilot lights shall flash when activated.
- I. Provide well running, well failure, and seal failure alarm contacts for each well. In addition, provide a low-level alarm contact.
- J. Manual override inputs for each well, which can be used to manually override the duplex control's well outputs when the controls are in the Auto mode. Inputs shall be provided to start or stop each well from a remote location.
- K. Improper sequence alarm (if required) to activate the common alarm in the event the control level inputs are activated in the wrong order. The order shall be Stop, Lead Start and Lag Start. The low-level alarm shall not be included in the improper sequence test.

- L. Provide automatic well alternation on seal failure when a seal failure condition is detected and the motors are in the automatic mode. The failed well shall be made the Lag well on future cycles until the failure condition is corrected.
- M. An exterior alarm light output which would flash the light brightly during any failure condition. The output shall allow the light to dim glow under normal conditions to indicate that power is on and the lamp is good. A normally open common alarm output contact shall be energized by these alarm conditions.
- N. A lamp test feature (if required) to light all of the front panel pilot lights.

<u>TAG</u>	<u>SERVICE</u>
DWC-1	Well Duplex Controller
6.03	

6.04 DELAY TIMER: Delay timers shall be the adjustable quelling constant type and shall be adjustable in one-second increments from 1 to 1023 seconds. They shall have a repeat accuracy of $\pm 0.1\%$ with no first shot effect. Setting accuracy shall be $\pm 2\%$ with reset time of 50 milliseconds maximum. Recycle time shall be no more than 150 milliseconds during timing and 16 milliseconds after timing. Each timer shall be provided with two LED indicators, indicating timing and on. Timer output contacts shall be double pole double throw, rated at 10 Amperes resistive at 120 VAC.

<u>TAG</u>	<u>SERVICE</u>
BST	Well Backspin Timer

6.05 MOTOR MONITOR: Provide an electronic solid state Motor Monitor with portional 4-20mA output, powered by 120 volt AC that will accept a zero (0) to five (5) amp input signal condition the signal to perform ON/OFF or OPEN/CLOSE discrete dry type setpoint contact conditions based on the input signal value. The Motor Monitor shall have the following features.

- A. Provide an LCD readout meter providing field adjustable scales of 0-25.0, 0-50.0, 0-100.0, 0-250, 0-500 and 0-1000 to accurately indicate the motor full load current using the 0-5 amp input signal.
- B. The Monitor shall be capable of displaying motor total running time up to 99,999.9 hours and be provided with reset capability from the rear of the monitor. The display shall include a non-volatile EEPROM memory backup

that does not require battery backup during power failure.

- C. Provide two (2) separate field adjustable setpoints, each with discrete, isolated sealed SPDT relay output contacts. The setting of each setpoint shall be adjustable throughout the complete signal range from the front of the Monitor. Each set point shall be provided with a field adjustable "ON" and "OFF" time delay, adjustable from zero (0) to fifteen (15) seconds. The actual setting of each setpoint shall be able to be displayed on the LCD readout at any time. An LED indicator shall be provided for each setpoint and shall operate as follows:
1. Setpoint No. 1: When setpoint is timing, the indicator shall burn amber. After timing period and current is at or above setpoint, indicator shall burn green.
 2. Setpoint No. 2: When set point is timing, the indicator shall burn amber. After set timing period and current is at or above setpoint, indicator shall burn red.
- D. Provide a 4-20mA or a 1-5Vdc output signal which is proportional to the amperes being measured. Load maximum impedance should not exceed 330 ohms. Output signal shall be factory calibrated.

<u>TAG</u>	<u>SERVICE</u>	<u>SCALE</u>
MM-1	Well Motor Monitor	0-500 amps

- 6.06 CURRENT TRANSFORMER: Current transformers insulation class shall be 0.6 KV BIL, 10 KV Full Wave. They shall be manufactured to meet the requirements of UL1244 and have a minimum accuracy of 60Hz of 2%. Current transformers shall be provided with brass stud terminals and mounting bracket.
- 6.07 CONTROL RELAYS: Provide a SnapTrack channel mounted relay board with LED status indicator and individual quick-connect terminals. The SnapTrack can be optionally snapped to a DIN rail. The indicator LED shall turn on when the relay is energized. The terminals shall be of the fixed screw cage clamp type, rated for at least 10 amps at 250 Volts. Tubular screw clamp types will not be accepted. The relay shall be rated for 10 amps. Surge suppression shall be provided on the coil side of the relay. The board shall include built-in transient protection across the coil. DC powered versions shall include a built-in diode across the coil to protect external devices from coil surges. The relay and connectors shall be UL approved.

- 6.08 PROPELLER FLOWMETER: Meter shall be a velocity propeller type, magnetic drive, sealed housing, flanged tube meter for 150-psi working pressure. It shall comply with the applicable provisions of AWWA C704-70. The meter shall come complete within a sealed indicator having a range as required, shall be equipped with a six digit totalizer, and shall be accurate within +2% of true flow. The meter assembly shall be constructed as follows:
- A. Meter Tube shall be fabricated steel pipe and use 150 lb. AWWA Class "D" flat face steel flanges. The internal and external of the meter tube and meter head shall be blasted to near white metal and coated with 12-15 mils of fusion epoxy coating, applied by the fluidized bed method. Meter tubes shall have a constant nominal inside diameter to offer minimum obstruction to the flow and shall be furnished with four straightening vanes.
 - B. Meter Head shall be connected to the tube by means of a flanged, o-ring sealed connection with stainless steel bolts designed for easy removal for inspection or repair.
 - C. Gearbox shall be bronze, sealed, and filled with a high-grade lubricant. The drive mechanism shall be magnetically driven from the propeller, through a ceramic sleeve magnetic coupling and be isolated from the water flow by means of an o-ring sealed housing. A rigid stainless steel vertical shaft is required from the miter gear frame to the indicator-totalizer; flexible cables will not be accepted.
 - D. Propeller shall utilize a water lubricated ceramic sleeve bearing that rides on a ceramic-coated stainless steel spindle. The spindle on which the propeller is mounted shall be parallel to the direction of the water flow in the pipe. Dual ceramic thrust bearings shall be standard on all meters to handle flows in both the forward and reverse directions. Ball bearings or other types of sleeve bearings will not be accepted. The propeller shall be a conical shaped, three bladed propellers, injection molded of thermoplastic material, resistant to normal water corrosion and deformity due to high flow velocities. Propellers, which have been trimmed, shaved or require varying change gears for the same size meters, will not be accepted.
 - E. Transmitter shall utilize a long life magnetically actuated reed switch. The pulse rate output is one contact per totalizer hand revolution, for use with a

remote totalizer. A two-lead shielded cable, four feet long, shall be furnished with each transmitter. The enclosure shall be made from injection molded glass filled engineered grade of thermoplastic. It shall attach directly to the propeller meter head with screws having holes for seal wires and be protected with an o-ring seal.

1. ACCURACY: Plus or minus 2.0% within the range specified for each meter size.
 2. TEMPERATURE: 140° F Maximum.
 3. FLOW RANGE: Acceptable for each indicator-totalizer-transmitter unit is the same as that for the meter to which the unit mounts.
 4. OUTPUT SIGNAL: Pulse rate: one contact per revolution of totalizer sweep hand. Maximum pulse transmission distance: 1,000 ft.
 5. SWITCH RATING: Contact rating 10 watts; Switching voltage 200 VDC-Max.; Switching current 0.5 Amp.-Max.; Carry current 1.2 Amp. Max.; Initial contact resistance 100 Ohms-Max.; Capacitance 0.2 Picofarads-typ. NOTE: Switch contact normally open.
 6. MATERIALS: Used in construction are chosen for their durability and immunity to the corrosive effects of atmospheric moisture and the liquids measured by the meter assembly.
- F. Totalizer shall be a six digit, straight reading type with a 3" diameter, 100-division dial and center sweep test hand to permit timing for an accurate determination of flow rate. The totalizer shall read in units of gallons and shall be magnetically driven and equipped with change gears to facilitate easy change of registration without removing pressure from the line. The totalizer shall be encased by an o-ring sealed bonnet made from injection molded 20% glass filled engineered grade of thermoplastic. The bonnet shall be attached to the transmitter by screws with seal wire holes and have a hinged lid with a padlock hasp. The bonnet mounting screws shall have holes for seal wires. Instantaneous indicator-totalizer or LCD type totalizer is not desired and will not be accepted.

<u>TAG</u>	<u>SERVICE</u>	<u>SIZE</u>	<u>RANGE</u>	<u>PULSE RATE</u>
FM	Well Discharge Flow	12"	0- xxx gpm	1 Pulse = 1k Gal.

SECTION 02210

EXCAVATION, TRENCHING AND BACKFILLING

PART I - GENERAL

1.01 SCOPE

A. The Work under this Section consists of furnishing materials, labor, equipment, and services necessary for the excavation trenching, and backfilling required for exterior light fixture standard foundations and underground electric supply lines to the building and lighting standards on this Project.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 02630 - Landscaping

B. Section 16000 - Electrical Provisions

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 LOCATION OF LIGHTING STANDARDS

Prior to excavation for exterior fixture standards, CONTRACTOR shall stake all standards locations and the ENGINEER shall approve these locations prior to construction. Stake all locations and give ENGINEER 48 hours notice for inspection. The ENGINEER shall have the authority to move any standard location up to ten (10) feet prior to excavation at no additional cost to the OWNER. Standard locations may have to be moved to avoid existing storm drain lines in the areas.

B. Underground electrical services shall be coordinate with the local retail supplier of electricity, communications, TV Cable and other utilities involved.

3.03 EXCAVATION

A. CONTRACTOR is to coordinate and cooperate with the OWNER in locating all subsurface equipment and facilities. CONTRACTOR shall be responsible for locating and exposing all existing underground structures, utilities and underground obstructions that may interfere with locating lighting standards, poles, conduits and services. All subsurface equipment and facilities shall be located and exposed prior to performing any digging and/or trenching. CONTRACTOR at his sole cost and expense will be responsible for repairing and/or replacing any damaged equipment and/or facilities caused by

excavating.

- B. All excavation of every description and of whatever substances encountered shall be performed to the depths indicated or as otherwise specified. During excavation material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid over-loading and to prevent slides or cave-ins. All excavated materials not required or suitable for back-fill shall be removed and disposed of offsite at the CONTRACTOR's expense. Grading shall be done as necessary to prevent surface water from flowing into trenches or other excavations, and any water accumulating therein shall be removed by pumping or by other approved methods. Sheet piling and shoring shall be done as necessary for the protection of the work and for the safety of personnel. Excavation shall comprise all materials encountered, including rock and filled-in material of whatever nature is involved.
- C. The conduits shall be laid and maintained to lines and grades established by the plans and specifications with fittings and foundations at the required locations unless otherwise approved by the ENGINEER.
- D. Prior to excavation investigation shall be made to the extent necessary to determine the location of existing underground utilities, structures and conduits.
CONTRACTOR shall exercise care during excavation to avoid damage to existing utilities and structures.
- E. When obstructions that are not shown on the plans are encountered during the progress of work and interfere so that an alteration of the plans is required the ENGINEER will alter the plans or order a deviation in line and grade or arrange or removal, relocation or reconstruction of the obstructions.
- F. When crossing existing pipelines or other structures, alignment and grade shall be adjusted as necessary, with the approval of the ENGINEER, to provide clearances as required by federal, state, or local regulations or as deemed necessary by the ENGINEER to prevent future damage or contamination of either structure.

3.03 TRENCHING - GENERAL

- A. The trench shall be excavated to the required alignment, depth and width and in conformance with all federal, state, and local regulations for the protection of the workmen.
- B. No excavation for the installation of conduit will be commenced which cannot be completed and back-filled within 24 hours.
- C. Discharge from any trench de-watering pumps shall be conducted to natural drainage channels, storm sewers, or an approved reservoir.

D. Excavated material shall be placed in a manner that will not obstruct sidewalks, driveways, or other structures and shall be done in compliance with federal, state, or local regulations

E. Removal of pavement and road surfaces shall be a part of the trench excavation and the amount removed shall depend upon the width of trench required for the installation of conduits. The dimensions of pavement removed shall not exceed the dimensions of the opening required for installation of conduits by more than 6 inches in any direction unless required or approved by the OWNER. Cut pavement edges shall be sawn to ensure breakage of pavement along straight lines. There is nothing in these Specifications that precludes punching or boring of conduit under streets, sidewalks, parking lots, or other paved areas as long as minimum cover requirements are met.

F. The width of the trench at the top of the conduit shall be that of the single-pass capabilities of normally available excavating equipment and ample to permit the conduit to be installed properly and allow the back-fill to be placed as specified. Trenches shall be of extra width, when required, to permit the placement of timber supports, sheeting, bracing, and appurtenances.

G. When excavation of rock is encountered, all rock shall be removed to provide a clearance of at least 9 inches below and on each side of all conduits. When excavation is completed, a bed of sand, crushed stone or earth that is free from stones, large clods, or frozen earth shall be placed on the bottom of the trench to the previously mentioned depths, leveled, and tamped. These clearances and bedding procedures shall also be observed for pieces of concrete or masonry and other debris or subterranean structures, such as masonry walls, piers, or foundations that may be encountered during excavation. This installation procedure shall be followed when gravel formations containing loose boulders greater than 8 inches in diameter are encountered. In all cases, the specified clearances shall be maintained between the bottom of all conduit and appurtenances and any part, projection, or point of rock, boulder, or stones of sufficient size and placement that may cause a fulcrum.

H. Should the trench pass over a sewer or other previous excavation, the trench bottom shall be sufficiently compacted to provide support equal to that of the native soil or conform to other regulatory requirements in a manner that will prevent damage to the existing installation.

I. Blasting for excavation shall be permitted only after securing the approval of the OWNER who will establish the hours of blasting. The blasting procedure, including protection of persons and property, shall be in strict accordance with federal, state, and local regulations.

J. Trees, shrubs, fences, and all other property and surface structures shall be protected

during construction unless their removal is shown in the plans and specifications or approved by the OWNER. Any cutting of tree roots or branches shall be done only as approved by the OWNER.

K. The CONTRACTOR shall furnish temporary support, adequate protection, and maintenance of all underground and surface structures, drains, sewers, and other obstructions encountered in the progress of the work. All properties that have been disturbed shall be replaced and/or restored as nearly as practical to their original condition.

L. When the sub-grade is found to be unstable or to include ashes, cinders, refuse, organic material, or other unsuitable material, such material shall be removed, to a minimum of at least 12 inches, or to the depth ordered by the ENGINEER and replaced under the directions of the ENGINEER with clean stable back-fill material.

When the bottom of the trench or the sub-grade is found to consist of material that is unstable to such a degree that, in the judgment of the ENGINEER it cannot be removed, a foundation for the conduit and or appurtenance shall be constructed using piling, timber, concrete, or other materials at the direction of the ENGINEER. Appropriate traffic control devices shall be provided in accordance with federal, state, or local regulations to regulate, warn, and guide traffic at the work site.

3.04 BACKFILLING - GENERAL

A. The trenches shall not be back-filled until the conduit as installed conforms to the requirements specified. Backfilling prior to approval of the ENGINEER or the OWNER is prohibited. Where, in the opinion of the ENGINEER damage is likely to result from withdrawing sheeting, the sheeting shall be left in place. Except as otherwise specified for special conditions of over-depths, trenches shall be back-filled to the ground surface with material that is suitable for the compaction specified hereinafter. Trenches improperly back-filled shall be reopened at the CONTRACTOR'S expense to the depth required for Proper compaction then refilled and compacted as specified, or the condition shall be otherwise corrected as approved.

B. All buried conduits and or underground electrical cables shall have a red Polyethylene "Caution Electrical Cable Buried Below" warning tape buried between the conduits and electrical cables and the surface of the ground providing a defense and warning against accidental dig-ins. APWA color guidelines shall be used for electrical power-lines. Tape shall be made of low density polyethylene and highly stretchable Tape shall be placed approximately 12 inches above conduits and or power cable nearest the surface of the ground.

C. In the lower portion of the trench back-fill material shall be deposited in 6 inch maximum thickness layers and compacted with suitable tampers to the density of the

adjacent soil or graded as hereinafter specified until there is a cover of not less than 6 inches over the conduit. The back-fill material in this portion of the trench shall consist of a selected material at a moisture content that will facilitate compaction, free from stones larger than 3 inches in any dimension and hard clods and frozen conglomerates larger than 6 inches in any dimension, except that where the pipe is coated or wrapped for protection against corrosion the back-fill material shall be free from stones larger than 1 inch in any dimension. If any portion of the cover in the lower portion of the trench is in the depth of special compaction and materials requirements under pavement, the special requirements shall control. Special care shall be taken not to damage the coating or wrapping of conduits.

D. Except for special materials for pavements, turf or seeded areas, and sidewalks the remainder of the trench shall be back-filled with material that is free of stones larger than 6 inches or $\frac{1}{2}$ the layered thickness, whichever is smaller, in any dimension. Backfill material shall be deposited in layers not exceeding 12 inches, and each layer shall be compacted to the minimum density specified as applicable to the particular area. Degree of compaction shall be 90 percent.

E. Unpaved surfaces disturbed during the installation of conduits shall be restored to their original elevation and condition. Topsoil shall be preserved carefully and replaced after the back-filling is completed Refer to Section 02630, Landscaping, for seeding and fertilizing requirements.

F. The CONTRACTOR shall patch pavement, sidewalks, curbs, and gutters where existing surfaces are removed for construction. Graded aggregate base course shall have a maximum aggregate size of $\frac{1}{2}$ inches. Base course shall be primed with a compatible tack coat prior to paving. Thickness of base course shall match existing but shall be at least 6 inches. Asphalt concrete shall be hot plant mixed and hot laid. Maximum aggregate size shall be $\frac{1}{2}$ inch and pavement thickness shall match existing thickness, but shall be at least 2 inches. Portland cement concrete pavement, sidewalks, curbs, and gutters, shall be repaired using 3,000 PSI concrete. Pavement thickness shall match existing thickness but shall be at least 6 inches. Sidewalk thickness and curb and gutter cross-sections shall match the existing.

G. Under paved areas or other areas indicated by the plans, back-fill trenches from 12 inches above the pipe to pavement base course in six-inch layers to 95 percent of maximum density as determined by AASHTO T180.

H. Under turf or seeded areas and sidewalks, back-fill trenches from 6 inches above the pipe to finished grade in 12 inch layers to 95 percent of maximum density as determined by AASHTO T180.

END OF SECTION

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

1500 GPM WESLEY WELL No. 2

FOR THE

**CITY OF HATTIESBURG
LAMAR COUNTY
MISSISSIPPI**



SEPTEMBER 2016



PREPARED BY:

**SHOWS, DEARMAN & WAITS, INC.
CONSULTING ENGINEERS
301 SECOND AVENUE
HATTIESBURG, MISSISSIPPI
(601) 544-1821**

INDEX

ADVERTISEMENTS FOR BIDS.....	1
INFORMATION FOR BIDDERS.....	2-4
PROPOSAL FORM.....	5-6
BID BOND.....	7-8
CONTRACT AGREEMENT.....	9-11
PAYMENT & PERFORMANCE BOND.....	12-13
NOTICE OF AWARD.....	14
NOTICE TO PROCEED.....	15
GENERAL CONDITIONS.....	16-53
SUPPLEMENTAL GENERAL CONDITIONS.....	54
SPECIAL CONDITIONS.....	54-55
MEASUREMET AND PAYMENT.....	56-57
CLOSE-OUT DOCUMENTS.....	58-59
TECHNICAL SPECIFICATIONS:	
Water Supply.....	60-70
Ductile Iron Water Systems.....	71-86
New Well Controls.....	87-110
Excavation, Trenching and Backfilling.....	111-116



ADVERTISEMENT FOR BIDS

NOTICE is hereby given that the City Clerk of the City of Hattiesburg, Mississippi, will receive sealed bids until 10:00 a.m. on October 13, 2016 in the City Clerk's Office in the City Hall at 200 Forrest Street of said City for furnishing the City's requirements for the following:

1500 GPM WESLEY WELL No. 2 HATTIESBURG, MISSISSIPPI

Plans, Specifications and proposal forms may be obtained from Shows, Dearman & Waits, Inc., 301 Second Avenue, Hattiesburg, Mississippi, 39401, upon deposit of \$100.00, non-refundable. All bids must be accompanied by bid security equal to 5% of the amount of the bid, in the form of a certified check, cashier's check or a bid bond written by a company properly licensed in Mississippi.

Each BID must be received in a sealed envelope which is marked in the lower left-hand corner EXACTLY as follows:

BID:

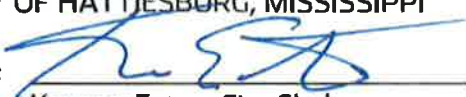
1500 GPM WESLEY WELL No. 2 HATTIESBURG, MISSISSIPPI

No bid may be withdrawn for a period of sixty (60) days. The lowest and best proposal received will be accepted, subject to the provisions of Section 31-7-13 of the Mississippi Code of 1972, Annotated and Amended, and other applicable State law; but the Council reserves the right to reject any or all proposals received and to waive informalities.

PUBLISHED by Order of the Council on the 6th day of September A.D., 2016.

CITY OF HATTIESBURG, MISSISSIPPI

BY:


Kermas Eaton, City Clerk

Publish on September 8, 2016 and September 15, 2016
City of Hattiesburg
Return PROOF to City Clerk's Office
PO Box 1898
Hattiesburg, MS 39403-1898

INFORMATION FOR BIDDERS

BIDS will be received by the CITY OF HATTIESBURG, MISSISSIPPI herein called the "OWNER", at City Hall until 10:00 a.m. on October 13, 2016, and then at said office publicly opened and read aloud.

Each BID must be submitted in sealed envelope, addressed to City of Hattiesburg. Each sealed envelope containing a BID must be plainly marked on the outside as BID for 1500 GPM WESLEY WELL No. 2 and the envelope should bear on the outside the BIDDER'S name, address, and license number if applicable, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed addressed to the Owner at P. O. Box 1898, Hattiesburg, MS 39403

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 60 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID BOND payable to the OWNER for five percent (5%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsive, responsible BIDDERS. When the Agreement is executed the BONDS of the two remaining

unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the PAYMENT BOND and PERFORMANCE BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A PERFORMANCE BOND and a PAYMENT BOND, each in the amount of 100 percent (100%) of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or PAYMENT BONDS and PERFORMANCE BONDS must file with each BOND a certified and effective dated copy of their Power of Attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the PERFORMANCE BOND and PAYMENT BOND within ten (10) calendar days from the date when NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable PERFORMANCE BOND, PAYMENT BOND and Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw the signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period; the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsible BIDDER.

All applicable Laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

FURTHER, the BIDDER agrees to abide by the requirements under Executive Order No. 11246, as amended, including specifically the provisions of the equal opportunity clause set forth in the SUPPLEMENTAL GENERAL CONDITIONS.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when required to do so by the OWNER.

The ENGINEER is SHOWS, DEARMAN & WAITS, INC. The address of the ENGINEER is 301 2nd Avenue, Hattiesburg, MS 39401.

PROPOSAL FORM

I (we) agree to begin work within (10) calendar days after the issuance of Work Order, and to complete the work within 180 calendar days thereafter.

The undersigned further agrees that the unit bid price quoted includes all items of work required or necessary for the accomplishment of the projected work.

BIDDERS agree to perform all the work described in the CONTRACT DOCUMENTS for the following unit bid prices:

BID: 1500 GPM WESLEY WELL No. 2 CITY OF HATTIESBURG					
Item No.	Item	Quantity	Unit	Price	Amount
1	TEST HOLE - 850 L.F. Deep	1	L.S.	\$155,000.00	\$155,000.00
2	16"X12" 1500 GPM WATER WELL - 820 L.F. Deep	1	L.S.	\$195,383.00	\$195,383.00
2A	ADD TO ITEM No. 2 PER FOOT OF COMPLETED WELL BELOW 820 L.F.	0	L.F.	\$400.00	\$0.00
2B	DEDUCT FROM ITEM No. 2 PER FOOT OF COMPLETED WELL ABOVE 820 L.F.	0	L.F.	\$200.00	\$0.00
3	12" MASTER WATER METER	1	L.S.	\$3,200.00	\$3,200.00
4	YARD PIPING - 12" DUCTILE IRON	1	L.S.	\$38,740.00	\$38,740.00
5	CHAIN-LINK FENCE/GATES	440	L.F.	\$15.40	\$6,776.00
6	ELECTRICAL WORK	1	L.S.	\$26,950.00	\$26,950.00
7	WELL CONTROLS	1	L.S.	\$30,951.00	\$30,951.00
8	EROSION CONTROL	1	L.S.	\$1,000.00	\$1,000.00
9	GRASSING	1	L.S.	\$1,000.00	\$1,000.00
				TOTAL BID	\$459,000.00

The undersigned certifies that the bid prices contained herein have been carefully checked and is submitted as correct and final.

If within thirty (30) days of the scheduled closing time for receipt of bids, this Proposal is accepted, the undersigned will execute a formal contract within seven (10) days after official notification thereof, will deliver a surety bond for the faithful performance of this contract, and will complete the work within the time specified from the date of execution of the contract.

Respectfully Submitted,

Thompson Brothers Drilling, Inc.

Name of Bidder

By:

538 Moselle Seminary Road

Address

Moselle, MS 39459

City, State

BID BOND

KNOW ALL MEN BY THESE PRESENTS: that we, the under signed, Thompson Brothers
Drilling, Inc. Principal, and SureTec Insurance Company as Surety, are hereby
held and firmly bound unto City of Hattiesburg as Owner in the penal sum of
for payment of which, well and truly to be made, we hereby jointly and severally bind
ourselves, successors and assigns.

Signed, this 13th day of October, 2016.

The Condition of the above obligation is such that whereas the Principal has submitted to
a certain BID, attached hereto and hereby made a part hereof to enter into a contract in
writing, for the following project:

1500 GPM WESLEY WELL No. 2
HATTIESBURG, MISSISSIPPI

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in
the Form of Contract attached hereto (properly completed in accordance with said BID)
and shall furnish a BOND for his faithful performance of said contract, and for the
payment of all persons performing labor or furnishing materials in connection therewith,
and shall in all other respects perform the agreement created by the acceptance of said
BID, then this obligation shall be void, otherwise the same shall remain in force and effect;
it being expressly understood and agreed that the liability of the Surety for any and all
claims hereunder shall, in no event, exceed the penal amount of this obligation as herein
stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said
Surety and its BOND shall be in no way impaired or affected by any extension of the time
within which the OWNER may accept such BID; and said Surety does hereby waive notice
of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and
seals, and such of them as are corporations have caused their corporate seals to be hereto
affixed and these presents to be signed by their proper officers, the day and year set forth
above.

Thompson Brothers Drilling, Inc

J.P. Thompson (L.S.)
PRINCIPAL

SureTec Insurance Company

SURETY

BY:

Ford Mosby, Attorney-in-Fact

IMPORTANT: Surety companies executing BONDS must appear on the Treasure Department's most current line (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Amy W. Smith, David W. Carlisle, Delores W. Nokes, Dudley D. Wooley, G. Ford Mosby, James Riley Winchester,
Joey H. Hutto, George Bailey Menetre, Michael Addison, Blake J. Martinez

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Three Million and 00/100 Dollars (\$3,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment shall continue in force until 5/18/2017 and is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of July, A.D. 2015

SURETEC INSURANCE COMPANY

By: _____

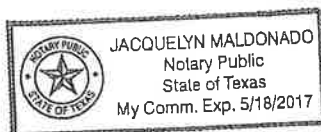
John Knox Jr., President

State of Texas
County of Harris

SS:



On this 21st day of July, A.D. 2015 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 13th day of October, 2015, A.D.

M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.

ADDENDUM No. 1
to the
CONTRACT DOCUMENTS and SPECIFICATIONS
for the
1500 GPM WESLEY WELL No. 2

CITY of HATTIESBURG

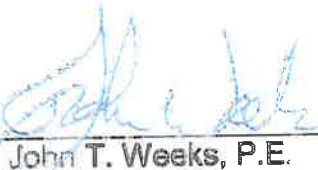
The following attached modifications are to be made to the specifications and contract documents for the above captioned project:

- CHANGE No. 1 -** The lap pipe shall be stainless steel as noted on page 4 of the plan documents.
- CHANGE No. 2-** All materials for the project shall be a product of the U.S.A.

SHOWS, DEARMAN & WAITS, INC.

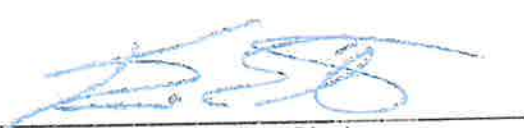
CITY OF HATTIESBURG

by:


John T. Weeks, P.E.



by:


Kermas Eaton, City Clerk

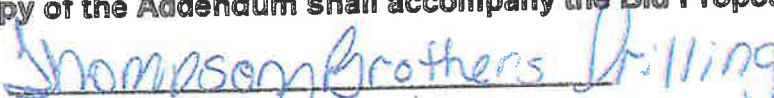
Dated this 6th day of October, 2016

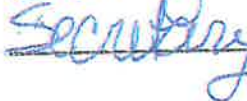
The receipt of this Addendum shall be indicated by signature on the line below.
A signed copy of the Addendum shall accompany the Bid Proposal.

Contractor:

Signature:

Title:





CONTRACT AGREEMENT

THIS AGREEMENT made and entered into this ____ day of _____, 20____ by and between _____ hereinafter called the CONTRACTOR, CITY OF HATTIESBURG hereinafter called the OWNER, Witnesseth that the Contractor and the OWNER, for the consideration hereafter named and agrees as follows.

ARTICLE 1: SCOPE OF WORK

The Contractor agrees to furnish all tools, labor, equipment, materials, and supplies required to be furnished, and perform all work required under and in accordance with the plans entitled:

1500 GPM WESLEY WELL No. 2

which are on file at the office of the OWNER, and the Specifications, Proposals, General and Special Conditions, attached hereto and made a part hereof as fully as though copied herein, under the direct supervision and to the entire satisfaction of the OWNER and in accordance with the Laws of the State of Mississippi.

ARTICLE 2: THE CONTRACT SUM

It is further agreed and understood by and between the parties hereunto that the OWNER agrees to pay and the Contractor agrees to accept full and final compensation for all work done under this agreement, the lump sum amount adjusted for variation of quantities at the unit prices named in the Proposal, which is hereto attached, such payment to be made in lawful money of the United States, at the time and in the manner hereinafter set forth.

ARTICLE 3: TIME OF COMPLETION

The Contractor agrees, for the consideration above expressed, to begin and complete the work within the time specified in the Proposal. If the Contractor fails to complete the work in the time specified, he shall pay the OWNER as **LIQUIDATED DAMAGES**, ascertained and agreed, and not in the nature of a penalty, the sum of **\$ 800.00** for each day delayed, which shall be deducted from the final amount to be paid under the contract; provided that the extension of time with the waiver of liquidation damages may be granted as provided for in the Specifications.

ARTICLE 4: PROGRESS PAYMENTS

The owner agrees to make progress payments during the construction as provided herein as follows:

The ENGINEER will on or before the tenth (10th) day of each month make an estimate of the value of the work done, based on contract prices.

The OWNER agrees to pay the CONTRACTOR 100% of the value of the work done each month, less five percent (5%) RETAINAGE until final acceptance of the work has been made).

ARTICLE 5: ACCEPTANCE AND FINAL PAYMENT

Upon receipt of written notice that the work is ready for final acceptance and inspection, the Engineer shall promptly make such inspection, and when he finds the work acceptable under the contract, and the contract fully performed, he shall promptly issue a final certificate, over his own signature, stating that the work provided for in this Contract has been completed and is accepted by him under the terms and conditions thereof. Then, the entire balance shall be due the Contractor within sixty (60) days of the date of said final acceptance.

Before issuance of final certificate, the Contractor shall submit evidence satisfactory to the ENGINEER that all payrolls, materials, bills, and other indebtedness connected with the work have been paid.

The making and acceptance of the final payment shall constitute a waiver of all claims by the OWNER, other than those arising from unsettled liens, from faulty work or materials appearing within one (1) year after payment, or claims previously made and still unsettled.

If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and the Engineer, so certifies, the OWNER shall, upon certificate of the Engineer and without terminating the Contract, make payment of the balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

ARTICLE 6: THE PERFORMANCE BOND

The Contractor agrees to furnish a bond, with an approved surety thereon guaranteeing the performance of this contract, in no less than one hundred percent (100%) of the amount of the Contract. Said Bond shall be conditioned on full and complete performance of the Contract, and for the payment of all labor and materials for a period of one (1) year after completion. The Surety on said Bond shall be a surety company of financial resources satisfactory to the OWNER and authorized to do business in the State of Mississippi.

ARTICLE 7: INSURANCE

The Contractor agrees to also carry Public Liability Insurance, Property Damage Insurance, and Workman's Compensation Insurance in amounts as required by the Specifications.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first written above.

OWNERS:

SEAL

City of Hattiesburg

BY

Title

ATTEST

CONTRACTOR:

SEAL

BY

Title

ATTEST

PAYMENT AND PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: THAT WE, the Undersigned (hereinafter called the Principal), a corporation, partnership or individual duly unauthorized by law to do business as a construction contractor in the State of Mississippi, and _____ of (herein called the Surety), a corporation duly authorized to do a surety business under the laws of the State of Mississippi, are held and firmly bound unto City of Hattiesburg, (hereinafter called the Obligee), a Municipality existing under the laws of the State of Mississippi, in the penal sum of Dollars (_____) lawful money of the United States, for the payment of which well and truly to be made, the said Principal and the said Surety do hereby bind ourselves, our heirs, executors, administrators and assigns, jointly and severally, by these presents, as follows:

The Condition of this obligation is such that; whereas Principal by an instrument In writing attached here-to and bearing date of _____ has agreed with said Obligee to do all work necessary and to furnish labor, materials, tools, supplies and services to construct **1500 GPM WESLEY WELL No. 2** as shown on Plans and specified thereby in the Specifications, Proposal and other Contract Documents hereto attached.

NOW THEREFORE, if said Principal shall well and truly in good, sufficient and workmanlike manner, and to the satisfaction of Obligee perform and complete the work required, and shall defend, indemnify and save harmless said Obligee against all damages, claims, demands, expense and charge of every kind (including claims of patent infringement) arising out of injury or damage to persons or property by reason or arising from any act, omission or neglect of said Principal, his agent, servants or employees with relation to said work; and shall pay all cost, charges, rentals and expenses for labor, material, supplies and equipment and deliver the said improvement to Obligee completed and ready for occupancy or operation, and free from all liens, encumbrances or claims for labor, material or otherwise; and shall pay all other expenses lawfully chargeable to Obligee by reason of any default or neglect of the said Principal in the relation of said agreement and said work, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said surety for value received hereby stipulates and agrees that no charge, extension of time, alteration or addition to the terms of the Contract, or the work to be performed hereunder, or the Specifications accompanying the same, shall in any way affect its obligation on this bond and does hereby waive notice of any change, extension of time, alteration or addition to the terms of the Contract, or to the work, or to the Specifications.

PROVIDED FURTHER, that if Principal, his or its subcontractor or subcontractors fail to duly pay for any labor, materials, team hire, sustenance provisions or any other

supplies or materials used or consumed by such Principal or his, their or its subcontractors in performance of the work contracted to be done, the Surety will pay the same in any amount not exceeding the sum specified in the bond, together with interest as provided by law.

IN WITNESS THEREOF: Said Principal and surety have hereunto set their hands and seals at _____ this _____ day of _____, 20__.

(SEAL)

WITNESSES:

PRINCIPAL

ADDRESS

Name of person executing for Principal

TITLE

SURETY

ADDRESS

WITNESSES:

Name of person executing for Surety

TITLE

NOTICE OF AWARD

TO: _____

Project: 1500 GPM WESLEY WELL No. 2

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated _____, 20____, and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND, and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 20____.

CITY OF HATTIESBURG
OWNER

BY: _____

TITLE: Mayor

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by
This the _____ day of _____, 20____.

Title: _____

Name: _____

NOTICE TO PROCEED

TO: _____

DATE: _____

Project: 1500 GPM WESLEY WELL No. 2

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20__ on or before _____, 20__, and you are to complete the WORK within 180 consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20__.

CITY OF HATTIESBURG
OWNER

BY: _____

TITLE: Mayor

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____ This the ____ day of _____, 20__.

Title:

Name: _____

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms shall have the meaning indicated which shall be applicable to both the singular and plural thereof.

ACCEPTANCE: By the OWNER of the Work as being fully complete in accordance with the Contract Documents.

AGREEMENT: The written agreement between the OWNER and the CONTRACTOR covering the Work to be performed: the Contract Documents are attached to and made a part of the Agreement. Also designated as the Contract.

ADDENDA: Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings and Specifications, by addition, deletions, clarifications or corrections.

APPLICATION FOR PAYMENT: The form furnished by the ENGINEER which is to be used by the CONTRACTOR in requesting progress payments and an affidavit of the CONTRACTOR that progress payments theretofore received from the OWNER on account of the WORK have been applied by the CONTRACTOR to discharge in full all of the CONTRACTOR'S obligations stated in prior Applications for Payment.

APPROVAL: Accept as satisfactory.

BID: The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

BIDDER: Any person, firm or corporation submitting a Bid for the Work.

BONDS: Bid, performance and payment bonds and other instruments of security furnished by the CONTRACTOR and his surety in accordance with the Contract Documents and in accordance with the law of the place of the project.

CHANGE ORDER: A written order to the CONTRACTOR signed by the OWNER authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

CONTRACT DOCUMENTS: The Agreement, Addenda, Instruction's to Bidders, CONTRACTOR'S BID, the Bonds, the Notice of Award, these General Conditions, the Supplementary conditions, Special Conditions, Technical Conditions, the Specifications,

Drawings and Modifications, and Notice to Proceed.

CONTRACT PRICE: The total moneys payable to the CONTRACTOR under the Contract Documents.

CONTRACT TIME: The number of calendar days stated in the Agreement for the completion of the Work.

CONTRACTING OFFICER: The owner (Grantee) - The individual who is authorized to sign the contract documents on behalf of the owner's governing body.

CONTRACTOR: The person, firm or corporation with whom the OWNER has executed the Agreement.

DAY: A calendar day of twenty-four hours measured from midnight to the next midnight.

DRAWINGS: The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by the ENGINEER and are referred to in the Contract Documents.

ENGINEER: The person, firm or corporation named as such in the Contract Documents.

FIELD ORDER: A written order issued by the ENGINEER which clarifies or interprets the Contract Documents in accordance with Paragraph 9.3 or orders minor changes in the Work in accordance with paragraph 10.2.

MODIFICATION: (a) A written amendment of the Contract Documents signed by both parties, (b) a Change Order (c) a written clarification or interpretation issued by the ENGINEER in accordance with paragraph 9.3 or (d) a written order for a minor change or alteration in the Work issued by the ENGINEER pursuant to paragraph 10.2. A modification may only be issued after execution of the Agreement.

NOTICE OF AWARD: The written notice by OWNER to the apparent successful Bidder stating that upon compliance with the conditions precedent to be fulfilled by him within the time specified, OWNER will execute and deliver the Agreement to him.

NOTICE TO PROCEED: A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform his obligations under the Contract Documents.

OWNER: A public body or authority, corporation, association, partnership, or individual

for whom the Work is to be performed.

PROJECT: The entire construction to be performed as provided in the Contract Documents.

CONSTRUCTION OBSERVER

RESIDENT INSPECTOR

CONSTRUCTION INSPECTOR

PROJECT REPRESENTATIVE: An authorized representative of the ENGINEER assigned to observe the Work performed and materials furnished by the CONTRACTOR or such other person as may be appointed by the OWNER as his representative. The CONTRACTOR shall be notified in writing of the identity of this representative.

SHOP DRAWINGS: All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a Subcontractor, manufacturer, supplier or distributor and which illustrate the equipment, material or some portion of the Work and as required by the Contract Documents.

SAMPLES: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

SPECIFICATIONS: Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work.

SUBCONTRACTOR: An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

SUBSTANTIAL COMPLETION: The stage in construction when a project can be utilized for the purposes for which it was intended. At substantial completion, minor items and items that are seasonally restricted need not be completed, but the items that affect operational integrity and function of the facility must be capable of continuous use.

SUPPLEMENTARY GENERAL CONDITIONS: Federal Conditions in effect at time of submission of Bid.

SUPPLIER: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

SPECIAL CONDITIONS: When included as a part of the Contract Documents, Special Conditions refer only to the Work under this Contract.

SURETY: The corporate body which is bound with the CONTRACTOR and which engages to be responsible for the CONTRACTOR and his acceptable performance of the Work.

WORK: Any and all obligations, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by CONTRACTOR under the Contract Documents, including all labor, materials, equipment and other incidentals, and the furnishing thereof.

WRITTEN NOTICE: The term "Notice" as used herein shall mean and include all written notices, demands, instructions, claims, approvals, and disapprovals required to obtain compliance with Contract requirements. Written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or to an authorized representative of such individual, firm or corporation, or if delivered at or sent by registered mail to the last business address known to him who gives the notice. Unless otherwise stated in writing, any notice to or demand upon the OWNER under this Contract shall be delivered to the OWNER through the ENGINEER.

ARTICLE 2 - PRELIMINARY MATTERS:

AWARD:

2.1 The award of the Contract, if it is awarded, will be to the lowest responsible, responsive Bidder. No Notice of Award will be given until the OWNER has concluded such investigations as he deems necessary to establish the responsibility, qualifications, and financial ability of the Bidders to do the Work in accordance with the Contract Documents to the satisfaction of the OWNER within the time prescribed. The OWNER reserves the right to reject the BID of any Bidder who does not pass such investigation to the OWNER'S satisfaction. In analyzing Bids, the OWNER may take into consideration alternates and unit prices, if requested by the Bid Form. If the Contract is awarded, the OWNER will issue the NOTICE of AWARD and give the successful Bidder a contract for execution within sixty (60) days after the opening of Bids.

EXECUTION OF AGREEMENT:

2.2 At least three counterparts of the Agreement and such other Contract Documents will be executed and delivered by CONTRACTOR to the OWNER within 10 working days or 15 calendar days of receipt from the OWNER.

FORFEITURE OF BID SECURITY:

2.3 Failure of the successful Bidder to execute and deliver the Agreement and deliver the required Bonds as stipulated in paragraph 2.2 shall be just cause for the OWNER to annul the Notice of Award and declare the Bid and any security therefore forfeited.

CONTRACTOR'S PRE-START REPRESENTATIONS:

2.4 CONTRACTOR represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with, the nature and extent of the Contract Documents, Work, Locality, and local conditions and will obey all federal, state, and local laws, ordinances, rules and regulations that may in any manner affect performance of the Work, and represents that he has correlated his study and observations with the requirements of the Contract Documents. CONTRACTOR also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Specifications and made such additional surveys and investigations as he deems necessary for the performance of the Work at the Contract Price in accordance with the requirements of the Contract Documents and that he has correlated the results of all such data with the requirements of the Contract Documents.

COMMENCEMENT OF CONTRACT TIME:

2.5 The Contract Time will commence to run no less than the 15 days after receipt by the CONTRACTOR of the Notice to Proceed.

STARTING THE PROJECT:

2.6 CONTRACTOR shall start to perform his obligations under the Contract Documents on the date when the Contract Time commences to run. No Work shall be done at the site prior to the date on which the Contract Time commences to run, except with the written consent of the OWNER.

BEFORE STARTING CONSTRUCTION:

2.7 Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. He shall at once report in writing to ENGINEER any conflict, error or discrepancy which he may discover; however, he shall not be liable to OWNER or ENGINEER for his failure to discover any conflict, error or discrepancy in the Drawings or Specifications.

SCHEDULE OF COMPLETION:

2.8 Within ten (10) days after delivery of the Notice to Proceed by OWNER to CONTRACTOR, CONTRACTOR shall submit to ENGINEER an estimated progress schedule with earnings indicating the starting and completion dates of the various stages

of the Work, and a preliminary schedule of Shop Drawing submissions. See paragraphs 6.22 through 6.26. The ENGINEER shall review and return this schedule or require revisions thereto within 14 days of its submittal. If there is more than one CONTRACTOR involved in a project, the responsibility for coordinating the Work of all CONTRACTORS shall be as provided in the Special Conditions.

2.9 Within twenty (20) days after delivery of the executed agreement by OWNER to CONTRACTOR, but before starting the Work at the site, a preconstruction conference will be held to review the above schedules, to establish procedures for handling shop drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the project. Present at the conference will be the OWNER or his representative, ENGINEER, Resident Project Representatives, CONTRACTOR and his Superintendent.

QUALIFICATION OF SUBCONTRACTORS MATERIALMEN AND SUPPLIERS:

2.10 Within ten (10) working days after bid opening, the CONTRACTOR will (if required) submit to the OWNER and the ENGINEER for acceptance a list of the names of Subcontractors and such other persons and organizations (including those who are to furnish principal items of material or equipment) proposed for those portions of the Work as to which the identity of the Subcontractors and other person and organizations must be submitted as specified in the Contract Documents. Within thirty (30) working days after receiving the list, the ENGINEER will notify the CONTRACTOR in writing if either the OWNER or the ENGINEER, after due investigation, has reasonable objection to any Subcontractor, person or organization on such list. The failure of the OWNER or the ENGINEER to make objection to any Subcontractor, person or organization on the list within thirty days of receipt shall constitute an acceptance of such Subcontractor, person or organization. Acceptance of any such Subcontractor, person or organization shall not constitute a waiver of any right of the OWNER or the ENGINEER to reject defective Work, material or equipment, or Work, material or equipment not in conformance with the requirements of the Contract Documents.

ARTICLE 3 - CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS:

3.1 It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between the OWNER and the CONTRACTOR. They may be altered only by a Modification.

3.2 The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, he shall call it to the ENGINEER'S attention in writing at once and before proceeding with the Work affected thereby; however, he shall not be liable to OWNER or

ENGINEER for his failure to discover any conflict, error or discrepancy in the Specifications or Drawings. The various Contract Documents shall be given precedence, in case of conflict, error or discrepancy, as follows: Agreement Modifications, Addenda, Special Conditions, and Instruction's to Bidders, General Conditions, Technical Specifications and Drawings.

3.3 The words "furnish", "furnish and install", "install", and "provide" or words with similar meaning shall be interpreted, unless otherwise specifically stated, to mean "furnish and install complete in place and ready for service."

3.4 Miscellaneous items and accessories which are not specifically mentioned, but which are essential to produce a complete and properly operating installation, or usable structure or plant providing the indicated function, shall be furnished and installed without change in the Contract Price. Such miscellaneous items and accessories shall be of the same quality standards including material, style, finish, strength, class, weight and other applicable characteristics, as specified for the major component of which the miscellaneous item or accessory is an essential part, and shall be approved by the ENGINEER before installation. The above requirement is not intended to include major components not covered by or inferable from the Drawings and Specifications.

3.5 The Work of all trades under this Contract shall be coordinated by the CONTRACTOR in such a manner as to obtain the best workmanship possible for the entire Project, and all components of Work shall be installed or erected in accordance with the best practices of the particular trade.

3.6 Manufacturer's literature, when referenced, shall be dated and numbered and is intended to establish the minimum requirements acceptable. Whenever reference is given to codes or standard specifications or other data published by regulating agencies or accepted organizations, including but not limited to National Electrical Code, applicable State Building Code, Federal Specifications, ASTM Specifications, various institute specifications, and the like, it shall be understood that such reference is to the latest edition including addenda in effect on the date of Bid.

3.7 Brand names where used in the Technical Specifications, are intended to denote the standard of quality required for the particular material or product. The use of a brand name item is to set a standard of quality and is not intended to restrict the Contractor from offering an equal item from other source(s) of supply. The term "equal" or "equivalent" when used in connection with brand names, shall be interpreted to mean a material or product that is similar and equal in type, quality, size, capacity, composition, finish, color and other applicable characteristics to the material or product specified by trade name, and that is for the same use and capable of performing the same function, in the opinion of the ENGINEER, as the material or product so specified. Proposed equivalent items must be approved by ENGINEER before they are purchased or incorporated in the Work.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE CONDITIONS; REFERENCE POINTS:

Availability of Lands

4.1 The OWNER will furnish, as indicated in Contract Documents the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise specified in the Contract Documents. Other access to such lands or rights-of-way for the CONTRACTOR'S convenience shall be the responsibility of the CONTRACTOR. The CONTRACTOR will provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 The OWNER will, upon request, furnish to the BIDDERS copies of all available boundary surveys.

Subsurface Conditions:

4.3 The CONTRACTOR acknowledges that he has investigated prior to bidding and satisfied himself as to the conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, tides, water tables or similar physical conditions at the site, the conformation and conditions of the grounds, the character of equipment and facilities needed preliminary to and during prosecution of the Work. The CONTRACTOR further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done on behalf of the OWNER on the site or any contiguous site, as well as from information presented by the Drawings and Specifications made a part of this Contract, or any other information made available to him prior to receipt of Bids. Any failure by the CONTRACTOR to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work. The OWNER assumes no responsibility for any conclusions or interpretations made by the CONTRACTOR on the basis of the information made available by the OWNER.

Differing Site Conditions

4.4 (a) The CONTRACTOR shall promptly, and before such conditions are disturbed, notify the OWNER in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract. The

OWNER shall promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the contract modified in writing accordingly.

(b) No claim of the CONTRACTOR under this clause shall be allowed unless the CONTRACTOR has given the notice required in (a) above.

(c) No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

ARTICLE 5 - BONDS AND INSURANCE:

Performance and Payment Bonds:

5.1 The contractor's attention is directed to the Information for Bidders.

Contractor's Liability Insurance:

5.2 The CONTRACTOR shall provide the OWNER with insurance certificates certifying that all required insurance is in force; and such insurance certificates shall include provisions that the insurance shall not be canceled, allowed to expire or be materially changed without giving the OWNER advance notice by registered mail.

5.3 The CONTRACTOR agrees that if any part of the Work under the contract is sublet, he will require the Subcontractor(s) to carry insurance as required, and that he will require the Subcontractor(s) to furnish to him insurance certificates similar to those required by the OWNER in 5.1 above.

5.4 The CONTRACTOR agrees to add ENGINEER to insurance policy as additional insured.

Owner's Liability Insurance

5.4 The OWNER will be responsible for purchasing and maintaining his own liability insurance and, at his option, may purchase and maintain such insurance as will protect him against claims which may arise from operations under the Contract Documents.

Fire and Extended Coverage Insurance (Builders' Risk):

5.5 The CONTRACTOR shall maintain, as applicable, in an Insurance Company or Insurance Companies acceptable to the OWNER, Fire, Extended Coverage and Vandalism & Malicious Mischief Insurance on buildings and structures, while in the course of construction, including foundations, additions, attachments and all permanent fixtures belonging to and

constituting a part of said buildings or structures. The policy or policies shall also cover machinery, if the cost of machinery is included in the Contract. The amount of insurance should at all times be at least equal to the actual cash value of the insured property. The policy shall be in the name of the OWNER and the CONTRACTOR, as their interests may appear, and shall also cover the interests of all Subcontractors performing work.

5.6 The CONTRACTOR shall provide the OWNER with satisfactory evidence certifying that the foregoing insurance is in force; and such evidence shall include provisions that the insurance shall not be canceled, allowed to expire or be materially changed without giving the OWNER advance notice by registered mail.

Cancellation and Re-Insurance:

5.7 If any insurance should be canceled or changed by the insurance company or should any insurance expire during the period of this Contract, the CONTRACTOR shall be responsible for securing other acceptable insurance to provide the coverage specified in this section to maintain continuous coverage during the life of this Contract.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES:

Supervision and Superintendence:

6.1 The CONTRACTOR will supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work. (Copies of written communications given to the Superintendent shall be mailed to the Contractor's home or office.)

Labor, Materials and Equipment:

6.2 The CONTRACTOR will provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. He will at all times maintain good discipline and order at the site.

6.3 The CONTRACTOR will furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, local telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of the Work.

6.4 All materials and equipment will be new, except as otherwise provided in the Contract

Documents. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or approved, such materials shall be delivered to the site in their original packages or container with seals unbroken and labels intact.

6.5 All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processors, except as otherwise provided in the Contract Documents.

Materials, Equipment, Products and Substitutions:

6.6 Materials, equipment and products incorporated in the Work must be approved for use before being purchased by the CONTRACTOR. The CONTRACTOR shall submit to the ENGINEER a list of proposed materials, equipment or products, together with such samples as may be necessary for him to determine their acceptability and obtain his approval, within ninety (90) calendar days after award of Contract. No request for payment for "or equal" equipment will be approved until this list has been received and approved by the ENGINEER.

6.6.1 Whenever a material, article or piece of equipment is identified on the drawings or Specifications by reference to brand names or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand names or catalog number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Incidental charges or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the Contract Price, or Contract Time.

6.6.2 No substitute shall be ordered or installed without the written approval of the ENGINEER who shall be the judge of equality.

6.6.3 Delay caused by obtaining approvals for substitute materials will not be considered justifiable grounds for an extension of construction time.

6.6.4 Should any work or materials, equipment or products not conform to requirements of the Drawings and Specifications or become damaged during the process of the Work, such Work or materials shall be removed and replaced, together with any work disarranged by such alterations, at any time before completion and acceptance of the Project. All such work shall be done at the expense of the CONTRACTOR. (See paragraph 7.10)

6.6.5 No materials or supplies for the Work shall be purchased by the CONTRACTOR or by

any Subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the Seller. The CONTRACTOR warrants that he has good title to all materials and supplies used by him in the Work.

Concerning Subcontractors:

6.7 The CONTRACTOR will not employ any Subcontractor, other person or organization of the types referred to in paragraph 2.10 (whether initially or as a substitute) against whom the OWNER or the ENGINEER may have reasonable objection, nor will the CONTRACTOR be required to employ any Subcontractor against whom he has reasonable objection. The CONTRACTOR will not make any substitution for any Subcontractor who has been accepted by the OWNER and the ENGINEER, unless the ENGINEER determines that there is good cause for doing so.

6.8 The CONTRACTOR shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any Subcontractor or other person or organization having a direct contract with CONTRACTOR, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. OWNER or ENGINEER may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific Work done in accordance with the schedule of values.

6.9 The divisions and sections of the Specifications and the identifications of any drawings shall not control the CONTRACTOR in dividing the work among Subcontractors or delineating the Work to be performed by any specific trade.

6.10 The CONTRACTOR agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the OWNER.

6.11 All Work performed for the CONTRACTOR by a Subcontractor shall be pursuant to an appropriate agreement between the CONTRACTOR and the Subcontractor.

6.12 The CONTRACTOR shall be responsible for the coordination of the trades, Subcontractors and material men engaged upon his Work.

6.12.1 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the CONTRACTOR by the terms of these General Conditions and other Contract Documents insofar as applicable to the Work of Subcontractors, and to give the CONTRACTOR the same power as regards

terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provisions of the Contract Documents.

6.12.2 The OWNER or ENGINEER will not undertake to settle any differences between the CONTRACTOR and his Subcontractors or between Subcontractors.

6.12.3 If in the opinion of the ENGINEER, any Subcontractor on the project proves to be incompetent or otherwise unsatisfactory, he shall be replaced if and when directed in writing.

Patent Fees and Royalties:

6.13 The CONTRACTOR will pay all license fees and royalties and assume all costs incident to the use of any invention, design, process or device which is the subject of patent rights or copyrights held by others. He will indemnify and hold harmless the OWNER and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees) arising out of any infringement of such rights during or after completion of the Work, and shall defend all such claims in connection with any alleged infringement of such rights.

6.14 The CONTRACTOR shall be responsible for determining the application of patent rights and royalties on materials, appliances, articles or systems prior to bidding. However, he shall not be responsible for such determination on systems which do not involve purchase by him of materials, appliances, and articles.

Permits:

6.15 The CONTRACTOR will secure and pay for all construction permits and licenses and will pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of his Bid. When such charges are normally made by the OWNER, there will be no charges to the CONTRACTOR. The OWNER shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR will also pay all public utility charges.

Laws and Regulations:

6.16 The CONTRACTOR will give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the CONTRACTOR observes that the Specifications or Drawings are at variance therewith, he will give the ENGINEER prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Modification. If the CONTRACTOR performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the ENGINEER, he will bear all costs arising wherefrom; however, it shall not be his primary responsibility to make certain that the Drawings and Specifications are in accordance with such laws, ordinances, rules and

regulations.

Taxes:

6.17 Cost of all sales and other taxes for which the CONTRACTOR is liable under the Contract shall be included in the Contract Price stated by the CONTRACTOR.

Record Drawings:

6.18 The CONTRACTOR will keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to the Engineer and shall be delivered to him for the OWNER upon completion of the Project. It shall be used for this purpose only.

Safety and Protection:

6.19 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to:

6.19.1 All employees on the work and other persons who may be affected thereby.

6.19.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.

6.19.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

6.20 The CONTRACTOR will designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the CONTRACTOR'S superintendent unless otherwise designated in writing by the CONTRACTOR to the OWNER.

Emergencies:

6.21 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, is obligated to act, at his discretion, to prevent threatened damage, injury or loss. He will give the ENGINEER prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change

Order shall thereupon be issued covering the changes and deviations involved. If the CONTRACTOR believes that additional work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Price or an extension of the Contract Time, he may make a claim therefore as provided in Articles 11 and 12.

Shop Drawing and Samples:

6.22 After checking and verifying all field measurements, the CONTRACTOR will submit to the ENGINEER for review, in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.9) copies (or at the ENGINEER'S option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of the CONTRACTOR. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable the ENGINEER to review the information as required.

6.23 The CONTRACTOR will also submit to the ENGINEER for review, with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and stamped with the approval of the CONTRACTOR, identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.

6.24 At the time of each submission, the CONTRACTOR will in writing call the ENGINEER'S attention to any deviations that the Shop Drawings or sample may have from the requirements of the Contract Documents.

6.25 The ENGINEER will review with reasonable promptness Shop Drawings and samples, but his review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The review of a separate item as such will not indicate review of the assembly in which the item functions. The CONTRACTOR will make any corrections required by the ENGINEER and will return the required number of corrected copies of Shop Drawings and resubmit new samples until the review is satisfactory to the ENGINEER. The CONTRACTOR shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by the ENGINEER on previous submissions. The CONTRACTOR'S stamp of approval on any Shop Drawings or sample shall constitute a representative to the OWNER and the ENGINEER that the CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalogue numbers and similar data or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawings or sample with the requirements of the Work and the Contract Documents.

6.26 No Work requiring a Shop Drawing or sample submission shall be commenced until the submission has been reviewed by the ENGINEER. A copy of each Shop Drawing and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall

be available to the ENGINEER.

6.27 The ENGINEER'S review of Shop Drawings or samples shall not relieve the CONTRACTOR from his responsibility for any deviations from the requirements of the Contract Documents unless the CONTRACTOR has in writing called the ENGINEER'S attention to such deviation at the time of submission and the ENGINEER has given written approval to the specific deviation, nor shall any review by the ENGINEER relieve the CONTRACTOR from responsibility for errors or omission in the Shop Drawings.

Cleaning Up:

6.28 Site. The CONTRACTOR shall clean up behind the Work as much as is reasonably possible as the Work progresses. Upon completion of the Work, and before acceptance of and final payment for the Project by the owner, the CONTRACTOR shall remove all his surplus and discarded materials excavated material and rubbish from the roadways, sidewalks, parking areas, lawns and all adjacent property; shall clean his portion of Work involved in any building under this Contract, so that no further cleaning by the OWNER is necessary prior to his occupancy; shall restore all property, both public and private, which has been disturbed or damaged during the prosecution of the Work; and shall leave the whole in a neat and presentable condition.

6.29 Clean-up operations shall consistently be carried on by the CONTRACTOR at all times to keep the premises free from accumulation of waste materials and rubbish. Upon completion of the Work he shall remove all rubbish, tools, scaffolding, surplus materials, etc., and shall leave his work "broom clean", or its equivalent, unless more exactly specified elsewhere in the Contract. The General CONTRACTOR shall do the following special cleaning for all trades upon completion of the Work.

6.30 General. In case of dispute, the OWNER may remove the rubbish and charge the cost to the several contractors as the ENGINEER shall determine to be just.

Public Convenience and Safety:

6.31 The CONTRACTOR shall, at all times, conduct the Work in such a manner as to insure the least practicable obstruction to public travel. The convenience of the general public and of the residents along and adjacent to the area of the Work shall be provided for in a satisfactory manner, consistent with the operation and local conditions. "Street Closed" signs shall be placed immediately adjacent to the Work, in a conspicuous position at such locations as traffic demands. At any time that streets are required to be closed, the CONTRACTOR shall notify law enforcement agencies, fire departments, and parties operating emergency vehicles before the street is closed and again as soon as it is opened. Access to fire hydrants and other fire extinguishing equipment shall be provided and maintained at all times.

Sanitary Provisions:

6.32 The General CONTRACTOR shall furnish necessary toilet conveniences, secluded from public observation, for use of all personnel on the Work, whether or not in his employ. They shall be kept in a clean and sanitary condition and shall comply with the requirements and regulations of the Public Authorities having jurisdiction. He shall commit no public nuisance. Temporary sanitary facilities shall be removed upon completion of the Work and the premises shall be left clean.

Indemnification:

6.33 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss, or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than Work itself) including the loss of use resulting wherefrom and (b) is caused in whole or in part by any negligent act or omission of the CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

6.34 In any and all claims against the OWNER or the ENGINEER or any of their agents or employees, by any employee of the CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.33 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

6.35 The obligations of the CONTRACTOR under paragraph 6.33 shall not extend to the liability of the Engineer's negligent acts, errors or omissions or those of his employees or agents.

Responsibility for Connecting to Existing Work:

6.36 It shall be the express responsibility of the CONTRACTOR to connect his Work to each part of the existing work or work previously installed as required by the Drawings and Specifications to provide a complete installation.

Work in Street, Highway and Other Rights-of-Way:

6.37 Excavation, grading, fill, storm drainage, paving and any other construction or installations in rights-of-way of streets, highways, public carrier lines, utility lines (either aerial, surface or subsurface), etc., shall be done in accordance with requirements of the

special conditions. The OWNER will be responsible for obtaining all permits necessary for the work. Upon completion of the Work, CONTRACTOR shall present to ENGINEER certificates, in triplicate, from the proper authorities stating that the Work has been done in accordance with their requirements.

6.37.1 The OWNER will cooperate with the CONTRACTOR in obtaining action from any utilities or public authorities involved in the above requirements.

6.37.2 The ENGINEER shall be responsible for obtaining elevations of curbs and gutters, pavement, storm drainage structures, and other such items which must be established by governmental departments as soon as grading operations are begun on the site and, in any case, sufficiently early in the construction period to prevent any adverse effect on the Project.

Cooperation with Governmental Departments, Public Utilities, Etc:

6.38 The OWNER shall be responsible for making all necessary arrangements with governmental departments, public utilities, public carriers, service companies and corporations owning or controlling roadways, railways, water, sewer, gas, electrical, telephone, and telegraph facilities such as pavements, tracks, piping, wires, cables, conduits, poles, guys, etc., including incidental structure connected therewith, that are encountered in the work in order that such items may be properly shored, supported and protected, or the CONTRACTOR may relocate them if he so desires. The CONTRACTOR shall give all proper notices, shall comply with requirements of such parties in the performance of his Work, shall permit entrance of such parties on the Project in order that they may perform their necessary work, and shall pay all charges and fees made by such parties for this work.

6.38.1 The CONTRACTOR'S attention is called to the fact that there may be delays on the Project due to work to be done by governmental departments, public utilities, and others in repairing or moving poles, conduits, etc. The CONTRACTOR shall cooperate with the above parties, in every way possible, so that the construction can be completed in the least possible time.

6.38.2 The CONTRACTOR shall have made himself familiar with all codes, laws, ordinances and regulations which in any manner affect those engaged or employed in the Work, or materials and equipment used in or upon the Work, or in any way affect the conduct of the Work, and no plea of misunderstanding will be considered on account of his ignorance thereof.

Use of Premises:

6.39 CONTRACTOR shall confine his apparatus, storage of materials, and operations of his workmen to limits indicated by law, ordinances, permits, and directions of ENGINEER and OWNER, and shall not unnecessarily encumber any part of site.

6.39.1 CONTRACTOR shall not overload or permit any part of any structure to be loaded with such weight as will endanger its safety, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

6.39.2 CONTRACTOR shall enforce OWNER'S instructions in connection with signs, advertisements, fires and smoking.

6.39.3 CONTRACTOR shall arrange and cooperate with OWNER in routing and parking of automobiles of his employees, subcontractors and other personnel and in routing material delivery trucks and other vehicles to the Project Site.

Protection of Existing Property Improvements:

6.40 Any existing surface or subsurface improvements, such as pavements, curbs, sidewalks, pipes or utilities, footings or structures (including portions thereof), trees, and shrubbery not indicated on the Drawings or noted in the Specifications as being removed or altered shall be protected from damage during construction of the Project. Any such improvements damaged during construction of the Project shall be restored to a condition equal to that existing at time of award of Contract.

Temporary Heat:

6.41 The General CONTRACTOR shall provide heat, fuel and services as necessary to protect all work and materials, within all habitable areas of permanent building construction, for all contracts against injury from dampness and cold until final acceptance of all work and materials for the Project, unless building is fully occupied by the OWNER prior to such acceptance, in which case the OWNER shall assume all expenses of heating from date of full occupancy. In areas outside those covered above, each prime contractor shall be responsible for providing such temporary heat, fuel and services as required to protect his work or shall make all necessary arrangements with the General CONTRACTOR for providing such temporary heat, fuel and services. Unless otherwise specifically permitted by Special Conditions, the permanent heating system shall not be used to provide temporary heat. CONTRACTOR'S proposed methods of heating shall be submitted for approval.

ARTICLE 7 - WORK BY OTHERS:

7.1 The OWNER may perform additional work related to the Project by himself, or he may let other direct contracts therefore which shall contain General Conditions similar to these. The CONTRACTOR will afford the other contractors who are parties to such direct contracts (or the OWNER, if he is performing the additional work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his Work with theirs.

7.2 If any part of the CONTRACTOR'S work depends for proper execution or results upon the work of any such other CONTRACTOR (or the OWNER), the CONTRACTOR will promptly report to the ENGINEER in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results.

7.3 The CONTRACTOR will do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. The CONTRACTOR will not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the ENGINEER and of the other contractors whose work will be affected.

7.4 If the performance of additional work by other contractors or the OWNER is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional work. If the CONTRACTOR believes that the performance of such additional work by the OWNER or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefore as provide in Articles 11 and 12.

7.5 Where practicable, the General CONTRACTOR shall build around the work of other separate contractors or shall leave chases, slots and holes as required to receive and to conceal within the general construction work the work of such other separate contractors as directed by them. Where such chases, slots, etc., are impracticable, the work shall require specific approval of the ENGINEER.

7.6 Necessary chases, slots and holes not built or left by the General CONTRACTOR shall be cut by the separate contractor requiring such alterations after approval of the General CONTRACTOR. The General CONTRACTOR shall do all patching and finishing of his Work where cut by other contractors at the expense of such other contractors.

7.7 Cooperation is required in the use of site facilities and in the detailed execution of the Work. Each CONTRACTOR shall coordinate his operations with those of the other contractors for the best interest of the Work in order to prevent delay in the execution thereof.

7.8 Each CONTRACTOR shall keep himself informed of the progress of the work of other contractors. Should lack of progress or defective workmanship on the part of other contractors interfere with his operations, the CONTRACTOR shall notify the ENGINEER immediately. Lack of such notice to the ENGINEER will be construed as acceptance by the CONTRACTOR of the status of the work of other contractors as being satisfactory for proper coordination of his own work.

7.9 Each CONTRACTOR shall give notices of the progress of his work so as to allow other contractors adequate opportunity to properly direct and coordinate their work. The General

Contractor shall give notices of the progress of his Work so that work of other contractors, when required to be concealed, may be placed before the general construction Work. All such notices shall be submitted to the ENGINEER with copies to other prime contractors on the Project sufficiently ahead of job progress to permit adequate time for the other prime contractors to coordinate their work.

7.10 The cost of extra work resulting from lack of notices, untimely notices, failure to respond to notices, defective work or lack of coordination shall be borne by the CONTRACTOR responsible for such lack of notices, etc.

ARTICLE 8 - OWNER'S RESPONSIBILITIES:

8.1 The OWNER will issue all communications to the CONTRACTOR through the ENGINEER.

8.2 In case of termination of the employment of the ENGINEER, the OWNER will appoint an engineer against whom the CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER. Any dispute in connection with such appointment shall be subject to arbitration, if mutually agreeable.

8.3 The OWNER will furnish the data required of him under the Contract Documents promptly and shall make payments to the CONTRACTOR promptly after they are due as provided in Article 14.

8.4 OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1, 4.4 and the Special Conditions. Paragraphs 4.2 and 4.3 refer to OWNER'S identifying and making available to CONTRACTOR copies of surveys and investigation reports of subsurface and latent physical conditions at the site or otherwise affecting performance of the Work which have been relied upon by ENGINEER in preparing the Drawings and Specifications.

8.5 The OWNER'S responsibilities in respect of liability and property insurance are set forth in paragraph 5.4.

8.6 In addition to his rights to request changes in the Work in accordance with Article 10, the OWNER (especially in certain instances as provided in paragraph 10.4) will be obligated to execute Change Orders.

8.7 In connection with the OWNER'S right to stop Work or suspend Work; see paragraph 15.1. Paragraph 15.3 deals with the OWNER'S right to terminate services of the CONTRACTOR under certain circumstances.

8.8 The OWNER shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding the fact that the time for

completing the entire Work or any portion thereof may not have expired; but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the Work, the CONTRACTOR shall be entitled to such extra compensation or extension of time or both, except by prior agreement, as the ENGINEER may determine. See paragraph 14.11.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION:

Owner's Representative:

9.1 The ENGINEER shall be the OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of the ENGINEER as the OWNER'S representative during construction are set forth in Articles 1 through 17 of these General Conditions and shall not be extended without written consent of the OWNER and the ENGINEER.

9.1.1 The ENGINEER'S decision, in matters relating to aesthetics shall be final, if within the terms of the Contract Documents.

9.1.2 Except as may be otherwise provided in this contract all claims, counter-claims, disputes and other matters in question between the OWNER and the CONTRACTOR arising out of or relating to this agreement or the breach thereof will be decided by arbitration if the parties hereto mutually agree, or in a court of competent jurisdiction within the State in which the OWNER is located.

Visits to Site:

9.2 The ENGINEER will make periodic visits to the site to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. He will not be required to make continuous on-site observations to check the quality or quantity of the Work. His efforts will be directed toward ascertaining on behalf of the OWNER that the completed Project will conform to the requirements of the Contract Documents. On the basis of his on-site observations as an experienced and qualified design professional, he will keep the OWNER informed of the progress of the Work and will endeavor to guard the OWNER against defects and deficiencies in the Work of contractors.

Clarifications and Interpretations:

9.3 The ENGINEER will issue with reasonable promptness such written clarification or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If the Contractor believes that a written

clarification and interpretation entitles him to an increase in the Contract Price or extension of Contract Time, he may make a claim therefore as provided in Articles 11 and 12.

Measurement of Quantities:

9.4 All Work completed under the Contract will be measured by the ENGINEER according to the United States Standard Measures. All linear surface measurements will be made horizontally or vertically as required by the item measured.

Rejecting Defective Work:

9.5 The ENGINEER will have authority to disapprove or reject Work which is "defective" (which term is hereinafter used to describe Work that is unsatisfactory, faulty or defective, or does not meet the requirements of any inspection, test or approval or has been damaged prior to final acceptance). He will also have authority to require special inspection or testing of the Work whether or not the Work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments:

9.6 In connection with the ENGINEER'S responsibility as to Shop Drawings and samples, see paragraphs 6.22 through 6.27, inclusive.

9.7 In connection with the ENGINEER'S responsibility for Change Orders; see Articles 10, 11, and 12.

9.8 In connection with the ENGINEER'S responsibilities in respect of Application for Payment, etc., see Article 14.

Resident Project Representative:

9.9 The OWNER or the ENGINEER will provide on-site representation sufficient to guarantee that construction is in general compliance with the construction drawings and the contract specifications.

Decisions on Disagreements:

9.10 The ENGINEER will be the initial interpreter of the terms and conditions of the Contract Documents and the judge of the performance hereunder. In his capacity as interpreter and judge, he will exercise his best efforts to insure faithful performance by both the OWNER and the CONTRACTOR. He will not show partiality to either and shall not be liable for the result of any interpretation or decision rendered in good faith. Claims, disputes and other matters relating to the execution and progress of the Work or the interpretation of or performance under the Contract Documents shall be referred initially to the ENGINEER for decision; which he shall render in writing within a reasonable time.

9.11 Either the OWNER or the CONTRACTOR, if the other agrees, may request legal action with respect to any such claim, dispute or other matter that has been referred to the ENGINEER, except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.11, such legal action to be in accordance with Article 16. However, no request for legal action of any such claim, dispute or other matter shall be made until the earlier of (a) the date on which the ENGINEER has rendered his decision or (b) the tenth day after the parties have presented their evidence to the ENGINEER if he has not rendered his written decision before that date. No request for legal action shall be made later than thirty (30) days after the date on which the ENGINEER rendered his written decision in respect of the claim, dispute or other matter as to which legal action is sought; and the failure to request legal action within said thirty (30) days period shall result in the ENGINEER'S decision being final and binding upon the OWNER and the CONTRACTOR. If the ENGINEER renders a decision after legal proceedings have been initiated, such decision may be entered as evidence but shall not supersede the legal proceedings, except where the decision is acceptable to the parties concerned.

Limitations on Engineer's Responsibilities:

9.12 Neither the ENGINEER'S authority to act under this Article 9 nor any decision made by him in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ENGINEER to the CONTRACTOR, any Subcontractor, any of their agents or employees or any other person performing any of the Work.

9.13 The ENGINEER will not be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions and programs incident thereto, and he will not be responsible for the CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

9.14 The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR, or any Subcontractors, or any of his or their agents or employees, or any other person performing any of the Work.

ARTICLE 10 - CHANGES IN THE WORK:

10.1 Without invalidating the Agreement, the OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by Change Orders. Upon receipt of a Change Order, the CONTRACTOR will proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 11 or Article 12. A Change Order signed by the CONTRACTOR indicates his agreement therewith.

10.2 The ENGINEER may authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If the CONTRACTOR believes that any minor change or alteration authorized by the ENGINEER entitles him to an increase in the Contract Price or extension of Contract Time, he may make a claim therefore as provided in Articles 11 and 12.

10.3 Additional Work performed by the CONTRACTOR without authorization of a Change Order will not entitle him to an increase in the Contract Price or an extension of the Contract Time, except in the case of an emergency as provided in paragraph 6.21 and except as provided in paragraph 10.2.

10.4 The OWNER will execute appropriate Change Orders prepared by the ENGINEER covering changes in the Work to be performed as provided in paragraph 4.4, and Work performed in an emergency as provided in paragraph 6.21 and any other claim of the CONTRACTOR for a change in the Contract Time or the Contract Price which is approved by the ENGINEER.

10.5 It is the CONTRACTOR'S responsibility to notify his surety of any changes affecting the general scope of the Work or change in the Contract Price and the amount of the applicable bonds shall be adjusted accordingly. The CONTRACTOR will furnish proof of such adjustment to the OWNER.

ARTICLE 11 - CHANGE OF CONTRACT PRICE:

11.1 The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the CONTRACTOR shall be at his expense without changing the Contract Price.

11.2 (a) The OWNER may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make any change in the Work within the general scope of the contract, including but not limited to changes:

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) In the Owner-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written order or an oral order (which terms as used in this paragraph (b) shall include direction, instruction, interpretation or determination) from the OWNER, which causes any such change, shall be treated as a change order under this clause, provided that the CONTRACTOR gives the OWNER written notice stating the date, circumstances, and source of the order and that the CONTRACTOR regards the order as a change order.

(c) Except as herein provided, no order, statement, or conduct of the OWNER shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment hereunder.

(d) If any change under this clause causes an increase or decrease in the CONTRACTOR'S cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any order, an equitable adjustment shall be made and the contract modified in writing accordingly: PROVIDED, HOWEVER, that except for claims based on defective specifications, no claim for any change under (b) above shall be allowed for any costs incurred more than 20 days before the CONTRACTOR gives written notice as therein required. And provided further, that in the case of defective specifications for which the OWNER is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the CONTRACTOR in attempting to comply with such defective specifications.

(e) If the CONTRACTOR intends to assert a claim for an equitable adjustment under this clause, he must, within 30 days after receipt of a written change order under (a) above or the furnishing of a written notice under (b) above, submit to the OWNER a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the OWNER. The statement of claim hereunder may be included in the notice under (b) above.

(f) No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

11.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

11.3.1 Where the Work involved is covered by unit prices contained in the Contract

Documents by application of unit prices to the quantities of the items involved. Should the Work (by quantity) be increased or decreased by 15 per cent from that stipulated in the Contract Documents, the OWNER and the CONTRACTOR may request adjustment of the unit prices by negotiation. If negotiation fails to reach agreement, then either party may request arbitration for the volume in excess of the 15 per cent differential.

11.3.2 By negotiated lump sum.

11.3.3 The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work plus a fixed amount to be agreed upon to cover the cost of general overhead and profit to be negotiated.

11.4 The term Cost of the Work means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. Except as otherwise maybe

agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

11.4.1 Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to salaries and wages plus the costs of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing work after regular working hours, on Sunday or legal holidays shall be included in the above to the extent authorized by OWNER.

11.4.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturer's field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

11.4.3 Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to him and shall deliver such Bids to OWNER who will then determine with the advice of ENGINEER, which Bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of Work plus a Fee, the cost of the Work shall be determined in accordance with paragraphs 11.4 and 11.5.

11.4.4 Costs of special consultants (including but not limited to, engineers, architects, testing laboratories, surveyors, lawyers and accountants) employed for services specifically related to the Work.

11.4.5 Supplemental costs including the following:

11.4.5.1 The proportion of necessary transportation, travelling and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

11.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workmen, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

11.4.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or other in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the cost of transportation, loading, unloading, installation, dismantling and removal thereof--all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall end when the use thereof is no longer necessary for the Work.

11.4.5.4 Sales, use or similar taxes related to the Work, and for which CONTRACTOR is liable imposed by any governmental authority.

11.4.5.5 Deposits lost for causes other than CONTRACTOR'S negligence, royalty payments and fees for permits and licenses. Costs for permits and licenses must be shown as a separate item.

11.4.5.6 Losses, damages and expenses, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the execution of, and to, the Work, provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractors, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of Work for the purpose of determining CONTRACTOR'S fee. If however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, he shall be paid for his services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7 The cost of utilities, fuel and sanitary facilities at the site.

11.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.4.5.9 Cost of premiums for additional Bonds and Insurance required because of changes in the Work.

11.5 The term cost of the Work shall not include any of the following:

11.5.1 Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals, (of partnership and sole proprietorships), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in his principal or a branch office for general administration of the Work and not specifically included in the schedule referred to in subparagraph 11.4.1 -- all of which are to be considered administrative costs covered by the CONTRACTOR'S Fee.

11.5.2 Expenses of CONTRACTOR'S principal and branch offices other than his office at the

site.

11.5.3 Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR'S for delinquent payments.

11.5.4 Cost of premiums for all bonds and for all insurance policies whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except as otherwise provide in subparagraph 11.4.5.9.)

11.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractors, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable including but not limited to, the correction of defective work, disposal of materials or equipment wrongly supplied and making good any damage to property.

11.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

11.6 The CONTRACTOR'S Fee which shall be allowed to CONTRACTOR for his overhead and profit shall be determined as follows;

11.6.1 A mutually acceptable firm fixed price; or if none can be agreed upon,

11.6.2 A mutually acceptable fixed fee based on the estimate of the various portions of the Cost of the Work.

11.7 The amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the net shall be computed to include overhead and profit, identified separately, for both additions and credits.

11.8 Whenever the cost of any Work is to be determined pursuant to paragraphs 11.4 and 11.5, CONTRACTOR will submit in form prescribed by ENGINEER an itemized cost breakdown together with supporting data.

11.9 Allowances: It is understood that the CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such material men, suppliers, or Subcontractors and for such sums within the limit of the allowances as the ENGINEER may approve. Upon final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. The CONTRACTOR agrees that the original Contract Price includes such sums as he deems proper for costs and profit on account of cash allowances. No demand for additional cost or

profit in connection therewith will be allowed.

11.9.1 These allowances shall cover the cost to the CONTRACTOR less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and all applicable taxes.

11.9.2 The CONTRACTOR'S costs for unloading and handling on site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Price and not in the allowance.

11.9.3 Whenever the cost, as described in 11.9.1 above, is more than or less than the allowance, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses, except that whenever unit price allowances are stipulated for brick, the Change Order will not include any cost as described in 11.5 above.

ARTICLE 12 - CHANGE OF THE CONTRACT TIME:

12.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to OWNER and ENGINEER within ten days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by ENGINEER if OWNER and CONTRACTOR cannot otherwise agree. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if he makes a claim therefore as provided in paragraph 12.1. Such delays shall include, but not be restricted to, acts or neglect by any separate contractor employed by OWNER, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

12.3 All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of the Article 12 shall not exclude recovery for damages (including compensation for additional professional services) for delay by either parties.

12.4 No claim for delay shall be allowed because of failure to furnish Drawings until two weeks after demand for such drawings and not then unless such claim be reasonable.

12.5 This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

ARTICLE 13 - GUARANTY:

13.1 The CONTRACTOR shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs or adjustments, in the Work that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

ARTICLE 14 - PAYMENTS AND COMPLETION:

Payments to Contractors:

14.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within sixty (60) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER may retain a portion of the amount otherwise due the CONTRACTOR. Except as State law otherwise provides, the amount the OWNER retains shall be limited to the following:

14.1.1 Withholding of not more than 10 per cent of the payment claimed until work is 50 per cent complete;

14.1.2 When Work is 50 per cent complete, reduction of the withholding to 5 per cent of the dollar value of all Work satisfactorily completed to date, provided that the CONTRACTOR is making satisfactory progress and there is no specific cause for greater withholding;

14.1.3 When the Work is substantially complete (operational or beneficial occupancy), the withheld amount shall be further reduced below 5 per cent to only that amount necessary to assure completion.

14.1.4 The OWNER may reinstate up to 10 per cent withholding if the OWNER determines, at its discretion, that the CONTRACTOR is not making satisfactory progress or there is other specific cause for such withholding.

Contractor's Warranty of Title:

14.2 The CONTRACTOR warrants and guarantees that title to all work, materials and equipment covered by an Application for Payment, whether incorporated in the Project or not, will have passed to the OWNER prior to the making of the Application for payment, free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens") and that no work, materials or equipment covered by an Application for Payment will have been acquired by the CONTRACTOR or by any other person performing the Work at the Site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the CONTRACTOR or such other person.

Approval of Payments:

14.3 The ENGINEER'S approval of any payment requested in an Application for Payment shall constitute a representation by him to the OWNER, based on the ENGINEER'S on-site observations of the Work in progress as an experienced and qualified design professional and on his review of the Application of Payment and the supporting data, that the Work has progressed to the point indicated; That, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in his approval), and that the CONTRACTOR is entitled to payment of the amount approved. However, by approving any such payment, the ENGINEER shall not thereby be deemed to have represented that he made exhaustive or continuous on-site observations to check the quality or the quantity of the Work, or that he has reviewed the means, methods, techniques, sequences, and procedures of construction or that he has made any examination to ascertain how or for what purpose the CONTRACTOR has used the moneys paid or to be paid to him on account of the Contract Price, or that title to any Work, materials, or equipment has passed to the OWNER free and clear of any Liens.

14.4 The CONTRACTOR shall make the following certification on each request for payment:
"I hereby certify that the labor and materials listed on this request for payment has been used in the construction of this work or that all materials included in this request for payment and not yet incorporated into the construction are now on the site or stored at an approved location; and payment received from the last request for payment has been used

to make payments to all first tier subcontractors and suppliers except as listed below."

14.5 The ENGINEER'S approval of final payment shall constitute an additional representation by him to the OWNER that the conditions precedent to the CONTRACTOR'S being entitled to final payment as set forth in paragraph 14.11 have been fulfilled.

14.6 The ENGINEER may refuse to approve the whole or any part of any payment if, in his opinion, he is unable to make such representations to the OWNER. He may also refuse to approve any such payment, because of subsequently discovered evidence or the results of subsequent inspections or tests nullify any such payment previously approved, to such extent as may be necessary in his opinion to protect the OWNER from loss because:

14.6.1 The Work is defective, or completed Work has been damaged requiring correction or replacement,

14.6.2 The Work for which payment is request cannot be verified,

14.6.3 Claims or Liens have been filed or there is reasonable evidence indicating the probable filing thereof,

14.6.4 The Contract Price has been reduced because of Modifications,

14.6.5 The OWNER has been required to correct defective Work or complete the Work in accordance with paragraph 13.1,

14.6.6. Of unsatisfactory prosecution of the Work, including failure to clean up as required by paragraphs 6.29 and 6.30,

14.6.7. Of persistent failure to cooperate with other contractors on the Project and persistent failure to carry out the Work in accordance with the Contract Documents,

14.6.8. Of liquidated damages payable by the CONTRACTOR or,

14.6.9. Of any other violation of, or failure to comply with, the provisions of the Contract Documents.

14.7 Prior to Substantial Completion, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the Work. Such use shall not constitute and acceptance of such portions of the Work.

14.8 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the Contract Documents. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the Work, or

restoration of any damaged Work, except such as may be caused by agents or employees of the OWNER.

14.9 Upon completion and acceptance of the Work, the ENGINEER shall issue a certificate attached to the final payment request that the Work has been accepted by him under the conditions of the Contract Documents. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the Work.

14.10 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the Contract Documents by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

Acceptance of Final Payment as Release:

14.11 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this Work and for every act and neglect of the OWNER and others relating to or arising out of this Work. Any payment however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the Contract Documents or the Performance Bond and Payment Bonds.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION:

Owner May Suspend Work:

15.1 The OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to the CONTRACTOR

and the ENGINEER which shall fix the date on which Work shall be resumed. The CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefore as provided in Articles 11 and 12.

Work During Inclement Weather:

15.2 No Work shall be done under these Specifications except by permission of the OWNER when the weather is unfit for good and careful work to be performed. Should the severity of the weather continue, the CONTRACTOR, upon the direction of the OWNER, shall suspend all work until instructed to resume operations by the OWNER and the Contract Time shall be extended to cover the duration of the order. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the CONTRACTOR. Any compensation for repairs or replacements shall be subject to approval of the OWNER.

Owner May Terminate:

15.3 If the CONTRACTOR is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property; or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to Subcontractors or for labor, materials or equipment or he disregards laws, ordinances, rules regulations or orders of any public body having jurisdiction, or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the Contract Documents, then the OWNER may without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety seven days written notice, terminate the services of the CONTRACTOR and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the Work by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to the CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR or the Surety will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a Change Order.

15.4 Where the CONTRACTOR'S services have been so terminated by the OWNER, said terminations shall not affect any rights of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys by the OWNER due the CONTRACTOR will not release the CONTRACTOR from liability.

15.5 Upon seven days written notice to the CONTRACTOR and the ENGINEER, the OWNER

may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Agreement. In such case, the CONTRACTOR shall be paid for all Work executed and any expense sustained plus a reasonable profit.

Removal of Equipment:

15.6 In the case of termination of this Contract before completion, for any cause whatever, the CONTRACTOR if notified to do so by the OWNER, shall promptly remove any part or all of his equipment and supplies from the property of the OWNER. Should the CONTRACTOR not remove such equipment and supplies, the OWNER shall have the right to remove them at the expense of the CONTRACTOR. Equipment and supplies shall not be construed to include such items for which the CONTRACTOR has been paid in whole or in part.

Contractor May Stop Work or Terminate:

15.7 If, through no act or fault of the CONTRACTOR, the Work is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any Application for Payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR any sum approved by the ENGINEER or awarded by court ruling within thirty (30) days of its approval and presentation, then the CONTRACTOR may, upon seven (7) days written notice to the OWNER and the ENGINEER, terminate the Agreement and recover from the OWNER payment for all Work executed and any expense sustained plus a reasonable profit. In addition and in lieu of terminating the Agreement, if the ENGINEER has failed to act on an Application for Payment or the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon seven (7) days notice to the OWNER and the ENGINEER stop the Work until he has been paid all amounts then due.

Owner Furnished Equipment:

15.8 In case the OWNER furnishes equipment to the CONTRACTOR to install, but fails to deliver it to the CONTRACTOR as required and in case such failure causes the CONTRACTOR additional expense or need for extension of time, the CONTRACTOR may make such claims upon the OWNER and obtain adjustments as provided herein.

Liquidated Damages:

15.9 If the CONTRACTOR shall fail to complete the work within the contract time, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the Contract Documents for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the Contract Documents.

ARTICLE 16 - DISPUTE SETTLEMENT:

16.1 All claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof except for claims which have been waived by the making or acceptance of final payment as provided by paragraph 14.11, shall be decided in a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS:

17.1 Whenever any provision of the Contract Documents requires the giving of written notice it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to him who gives the notice.

17.2 If the OWNER fails to make payment sixty (60) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such progress payment, interest at 1% per month commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

17.3 All Specifications, Drawings and copies thereof furnished by the ENGINEER shall remain his property. They shall not be used on another Project, and, with the exception of those sets which have been signed in connection with the execution of the Agreement, shall be returned to him on request upon completion of the Project.

17.4 The duties and obligations imposed by these General Conditions, and the rights and remedies available hereunder, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.36 and 14.3 and the rights and remedies available to OWNER and ENGINEER there under, shall be in addition to, and shall not be construed in any way as a limitation of, any rights and remedies available by law, by special guarantee or by other provisions of the CONTRACT DOCUMENTS.

17.5 Should the OWNER or the CONTRACTOR suffer injury or damage to its person or property because of any error, omission or act of the other or of any of his employee or agents or others for whose acts he is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage.

17.6 The CONTRACT DOCUMENTS shall be governed by the law of the place of the Project.

Progress Charts and Requirements for Overtime Work

17.7 The CONTRACTOR shall within 5 days or within such time as determined by the

OWNER after date of commencement of work prepare and submit to the OWNER for approval a practicable schedule, showing the order in which the CONTRACTOR proposes to carry on the work, the date on which he will start the several salient features (including procurement of materials, plans and equipment) and the contemplated dates for completing the same. The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion at any time. The CONTRACTOR shall enter on the chart the actual progress at such intervals as directed by the OWNER and shall immediately deliver to the OWNER three (3) copies thereof. If the CONTRACTOR fails to submit a progress schedule within the time herein prescribed, the owner may withhold approval of progress payment estimates until such time as the CONTRACTOR submits the required progress schedule.

If, in the opinion of the OWNER, the CONTRACTOR falls behind the progress schedule, the CONTRACTOR shall take such steps as may be necessary to improve his progress and the OWNER may require him to increase the number of shifts, or overtime operations, days of work, or the amount of construction plant, or update the progress schedule to reflect increased production for meeting the completion date, or all of them, and to submit for approval such supplementary schedule or schedules in chart form as may be deemed necessary to demonstrate the manner in which the agreed rate of progress will be regained, all without additional cost to the OWNER.

Failure of the CONTRACTOR to comply with the requirements of the OWNER under this provision shall be grounds for determination by the OWNER that the CONTRACTOR is not prosecuting the work with such diligence as will insure completion within the time specified. Upon such determination the OWNER may terminate the CONTRACTOR'S right to proceed with the work or any separable part thereof in accordance with the clause of the contract entitled, "Termination for Default-Damages for Delay - Time Extensions.

Should the Contractor fail to complete the work within the specified time, or within any extra time allowed under these specifications, a sum of money, determined by the following schedule, shall be deducted from any funds due the Contractor, the Owner shall have the right recover the said sum or sums from the Contractor or from the surety, or from both. The amounts of these deductions are to cover the liquidated damages to the Owner incurred by additional or other expenses due to the failure of the Contractor to complete the work or any part of the work within the time specified, and such deductions are not to be considered penalties.

The damages indicated above shall be considered as liquidated damages for the loss to the Owner on account of the expense due to the employment of Engineers and their assistants and to any others expenses incurred after the expiration of the Contract time as determined by the Engineer.

SECTION 01 00 00
SUPPLEMENTAL GENERAL

- 1.01 The Technical Specifications entitled “Mississippi Standard Specifications for Road and Bridge Construction, Current Edition” shall be the specifications applicable to this project except as for herein specified. Any testing required by those specifications for material submittal approval shall be the responsibility of the Contractor. The testing laboratory used by the Contractor shall be a laboratory certified by the Mississippi Department of Transportation and shall be approved by the Contracting Officer. Any reference to Unit Item for pay shall be deleted, as the Project is Lump Sum.
- 2.01 Any reference in the above mentioned specifications to Commission, Director, Chief Engineer, Testing Engineer, or Project Engineer shall be amended in these specifications to mean the Contracting Officer, or his duly authorized representative, of the Mississippi Military Department.

ADDITIONAL PROJECT INFORMATION

- 1.01 Project Superintendent: The contractor shall have a competent and experienced superintendent on the project at all times. This project superintendent shall not operate any equipment while on the project site. Work on the project shall stop if the assigned superintendent is not on site. At all times shall mean during all phases of construction including but not limited to electrical, civil, structural and all other unnamed phases of construction. Contractor shall be limited to one approved change of superintendent during construction.

SPECIAL CONDITIONS

1. SCOPE AND INTENT

Special conditions shall prevail over General Conditions in case of conflict. The Contractor shall furnish all labor, materials, equipment (including fuel), tools, appliances, transportation and perform all operations in connection with the construction of, alterations to, or repair of, the building, including utilities, complete, in strict accordance with the specifications and the plans governing the construction of, alterations to, or repair of, the buildings.

2. EXAMINATION OF PREMISES

Before submitting a proposal for his work, each bidder shall be held responsible to have examined the site and satisfied himself as to the conditions under which work is to be performed.

3. PERMITS, TAXES, AND ORDINANCES

The Contractor shall pay for all required permits, give legal notices, pay taxes and assessments levied in connection with this contract. Building regulations of the local county or the Southern Building Codes shall be strictly adhered to and the contractor shall be responsible for knowledge thereof.

4. INSURANCES, ETC.

The Contractor, for himself and any subcontractors, shall effect and maintain at his own expense, insurance satisfactory to the Owner in minimum amounts as follows:

- A. Contractor and Subcontractors shall in all things, conform to the requirements of the Workman's Compensation Act of the Laws of the State of Mississippi and qualify thereunder as a condition precedent to the performance of this contract. Contractor shall, as required by Owner to do so, submit satisfactory proof of qualifications and conformity of himself and each subcontractor with said Act.
- B. Manufacturer's or Contractor's Public Liability Insurance is not less than **\$100,000** and **\$300,000** limits Bodily Injury and Property Damage Insurance in not less than **\$50,000** and **\$100,000** limits.
- C. Contractor's Protective Public Liability Insurance in not less than **\$100,000** and **\$300,000** limits Bodily Injury and Property Damage Insurance in not less than **\$50,000** and **\$100,000** limits.
- D. Automobile Public Liability Insurance is not less than **\$100,000** and **\$500,000** limits Bodily Injury and Property Damage Insurance in not less than **\$50,000** limits.

5. CLEANING UP

The Contractor shall, at all times, keep the premises free from accumulations of waste materials and at the completion of the work, be shall remove all his rubbish, tools,

temporary buildings, etc. from and about the site and shall leave his work broom clean unless more exactly specified elsewhere. All glass shall be washed and left free from stains of any nature.

6. GUARANTEE

The Contractor shall guarantee to the City of Hattiesburg all work under this contract to be free from defects in workmanship and materials for a period of one (1) year from date of final acceptance.

MEASUREMENT AND PAYMENT

Measurement and Payment for the following bid items shall be as described and shall include all material, equipment, labor, testing, etc. to install and make operational a complete water system as detailed on the contract drawings and as specified in the contract documents.

TEST HOLE

Payment for item shall consist of all components required to establish a test hole for the depth as indicated on the proposal. Test Hole shall provide data including electric log, sieve analysis, etc as commonly provided in water well construction. Payment shall include all items necessary to provide information to the owner including labor, materials and equipment. Payment shall be lump sum.

1500 GPM WATER WELL

Payment for furnishing and installing well, will be made at the contract unit price per well according to type and size as listed in the Proposal and shall include all pumps, valves, associated piping, etc. as detailed in these specifications or shown in the plans. It shall include but not limited to air release valve, blind flanges, check valves, elbows spools, ductile iron water line, valves tie-in, etc. as necessary based on the plans and specifications. Other items will be as outlined in the proposal as it relates to actual construction of water well. The contract price shall be lump sum.

MASTER WATER METER

Payment for master water meter shall include all materials, labor and equipment necessary to install the meter and wiring as related to a functioning meter as detailed in the specifications. The contract price shall be per each.

YARD PIPING- 12 INCH DUCTILE IRON

Payment for item shall include all components located below the ground between the well pump motor and the existing aerator. The contract price shall be per linear foot.

CHAIN-LINK FENCE AND GATE

Basis of payment shall include the plans as noted and shall be according to the Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition. Payment to be made per linear foot. No distinction will be made between fencing and gate with regards to payment.

ELECTRICAL WORK

Payment for item shall include all components as necessary to provide electrical power upgrades to the site. Payment shall include all items necessary to provide electrical service to the well site including labor, materials and equipment. Payment shall be lump sum.

WELL CONTROLS

Payment for well controls shall include all materials and installation of control system relating to but not limited to wells, lights, etc., to make an operational system. Controls shall function with existing systems at treatment plant site. System shall include necessary telemetry components as necessary. The contract price shall be lump sum.

EROSION CONTROL

Payment for erosion control shall include furnishing, installing and maintaining silt fence as required by current Mississippi Department of Environmental Quality standards. Silt fence shall be installed and maintained as directed by the Engineer to prevent erosion under or excess siltation within 24 hours of a rain event. The unit measurement shall be Lump Sum and includes any required maintenance.

GRASSING

Basis of payment shall include the vegetation schedule as noted and shall be according to the Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition.

CLOSE-OUT DOCUMENTS

In general documents for close out, to be submitted by the Contractor to the Owner, prior to final payment, shall be; but not limited to the following:

1. APPLICATION FOR PAYMENT: AIA Document G-702
2. CERTIFICATE OF SUBSTANTIAL COMPLETION: AIA Document G-704
3. CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS:

AIA Documents G-706 and G-706A: The Contractor shall furnish these AIA Documents complete with attached notarized full release of liens, damages, and a guarantee that all materials and labor are paid in accordance with Contract Documents with the following wording:

WE HEREBY CERTIFY THAT ALL BILLS FOR LABOR AND MATERIALS INCORPORATED INTO THE ABOVE CAPTIONED PROJECT UNDER OUR CONTRACT HAVE BEEN PAID AND THAT THE OWNER IS RELEASED FROM ANY AND ALL CLAIMS AND/OR DAMAGES UNDER THIS CONTRACT.

4. CONSENT OF SURETY COMPANY TO FINAL PAYMENT: AIA Document G-707 to be completed in full by the Bonding Company.
5. CONTRACTOR'S NOTARIZED STATEMENT:
Notarized statement that project has been constructed in accordance with Contract Documents.
6. CONTRACTOR'S NOTARIZED STATEMENT OF GUARANTEE/S:
Reference: Page GWB-1 of Specifications. All work will be guaranteed by the Contractor for a period of one (1) year from the date of substantial completion. Wording will be as follows:

WE HEREBY GUARANTEE ALL WORK PERFORMED BY US ON ABOVE CAPTIONED PROJECT TO BE FREE FROM DEFECTIVE MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR OR SUCH LONGER PERIOD OF TIME AS MAY BE CALLED FOR IN THE CONTRACT DOCUMENTS FOR SUCH PORTIONS OF THE WORK.

In the case of work performed by his sub-contractors, the Contractor shall secure warranties from said sub-contractors and deliver copies of same to the Owner upon completion of work.

7. OPERATING AND MAINTENANCE MANUALS:

All manufacturer's operating instructions and maintenance manuals will be compiled in a tabbed and labeled 3-ring binder. **(Furnish Owner with two (2) sets).**

8. FORM W-9, PAYER'S REQUEST FOR TAXPAYER IDENTIFICATION NUMBER AND CERTIFICATION (IRS):

Form W-9 is to be completed by non-corporation contractors. Non-applicable if Contractor's firm is Incorporated.

9. FINAL CLEANING:

At close out time clean and re-clean entire work to normal level for FIRST CLASS maintenance/cleaning.

DETAILED SPECIFICATIONS
FOR
WATER SUPPLY

A. SCOPE:

The work includes the furnishing of all labor, tools, equipment, hauling, and necessary items for the construction of the water supply hereinafter specified. The Contractor is cautioned to read the Specifications thoroughly so there will be no questions as to compliance. The Contractor is required to submit with his bid information on the proposed Well materials and Pumping equipment to assure the Owner of compliance with the Specifications.

One Contractor shall perform all the work related to the construction of new Well with the Pump and Pump motor installation at the new Well. The Contractor shall be responsible for conforming to the Well and Pump Construction Specifications as well as the performance testing requirements. Refer to the proposal data sheets in the Specifications for specific requirements concerning the installation of each Well and Pump.

Upon completion of the project and prior to acceptance, the Well Contractor shall sterilize and re-sterilize the Wells as necessary until two consecutive samples of chlorine-free water are found to be free of organisms of the Coli Aerogenes group. Sample shall be taken and submitted in accordance with Mississippi State Board of Health Regulations.

Site work shall be coordinated between the Well Contractor and the Owner.

Discharge piping shall be installed as indicated on the plans between the Pump and the existing City piping. The Well Contractor is responsible for connecting to the existing line.

B. TEST HOLE:

1. Upon receipt of the written Notice to Proceed, and prior to construction of the permanent Well, the Contractor shall drill a test hole of approximately nine inches (9") in diameter to depth of not less than 850 feet. The test hole is to be drilled in order to determine the aquifer characteristics.
2. Sand samples shall be taken in duplicate of all sand formations encountered below 300 feet. There shall be provided a mud ditch of sufficient length for the sand cuttings to collect before the mud returns to the mud pit for re-pumping. After each

drill rod is cut down and the sand samples are collected, then collection ditch shall be cleaned of the cuttings and drilling shall continue. The Contractor shall have a sieve and flow analysis completed on each sand formation encountered that may be screened below 300 feet.

3. After the test hole has been completed to the specified depth, the Contractor shall arrange for an electric log to be run for the entire depth of the hole along with a gamma ray log.
4. The Engineer and Contractor shall then determine the optimum Well design, taking into account the minimum requirements as set forth herein.

C. GUARANTEE OF PRODUCTIONS:

1. After the test hole, reports and recommendations are complete, the Contractor shall guarantee to the Owner to construct and install a Well, as herein specified, which will, for the period of guarantee, furnish water as a rate of not less than 1500 U.S. Gallons per minute, and; as estimated for the existing well, shall maintain a constant above ground head of 40 pounds and when continuously operated for not longer than the time specified under the "Testing" procedures, and shall further guarantee that said Well will actually produce and deliver the said guaranteed quantity of water throughout a one year period from the date of Owner's acceptance.
2. If at any time during the one (1) year period, the Owner should test the Well and show the production is less than the guaranteed minimum, or less than the quantity paid for, then the Owner shall send written notice to the Contractor. Upon receipt of such a notice, the Contractor shall proceed promptly to do such things as he deems necessary to again bring the Well and Pump back to the original guaranteed capacity. In the event the Contractor has to abandon a Well because of geological conditions, the Contractor will notify the Engineer in writing. If the Engineer agrees, he may instruct the Contractor to move to a new site. After the Contractor has abandoned the old Well site in accordance with current rules, regulations and procedures of the Mississippi Health Department or the procedure currently being used by Mississippi Department of Environmental Quality (MDEQ), whichever is appropriate, the Contractor shall be paid for the mobilization, drilling, abandonment, and mobilization to a new site as outlined in the Contract price schedule. However, should the Contractor fail to sink the Well to the depth specified, or to such lesser depth as ordered by the Engineer, or should he abandon the Well because of loss of tools or for any other cause, he shall recover such material as he elects, properly fill the abandoned hole in accordance with current rules, regulations and procedures of the Mississippi Health Department or the Procedures currently being used by MDEQ. Contractor will not receive any compensation for the abandoned well.

D. ELECTRIC LOGGING:

The Contractor will make necessary arrangements to have an electric log, and gamma log run on the hole and the Contract shall expedite the running of this log as directed by the Engineer.

E. WELL DEPTH:

The Well shall be drilled to a depth necessary to penetrate the water-bearing sand. This depth is thought to be from 770 feet to 820 feet below the surface, but this statement concerning depth shall in no way be construed to impose any liability on the Owner or Engineer.

F. CASING:

1. Surface Casing: The Contractor may elect to use surface casing. If so, he may use whatever he wishes but no payment by the Owner will be made. He will not be required to leave the surface casing in place but the Contractor may do so at his own option.

2. Outer Casing:

The outer casing shall extend from 2 feet above the surface of the ground to the top of the water-bearing strata. The casing shall be not less than 16 inches in diameter and shall be of black steel material with a wall thickness of not less than .500 inches. The casing shall be API 5L or A53. Original Mil Certificates with matching heat numbers shall be supplied by the Contractor. The casing shall have either welded joints or screwed connections to insure against leakage from the outside sources. It shall be installed sufficiently straight so as to permit the satisfactory operation of the permanent Pump. The diameter of the hole drilled to receive the outer casing shall be large enough to leave an annular space of not less than 2-1/2 inches around the casing. The casing shall be installed with centering guides to center the casing in the drilled hole. The casing shall be cemented in place by using a pressure cementing process by starting the cement from the bottom of the hole in separate temporary pipe lines, or by the Haliburton method or equal. After the mud around the casing has been flushed out, the annular space around the entire casing for its entire length shall be filled with a high-early strength neat cement grout weighing no less than 15 pounds per gallon. After cement is in place, it shall be allowed to set and harden for at least 24 hours before drilling operations are continued. The casing shall be epoxy-coated on the inside no less than 10 mils thick with a coating approved by the Mississippi State Board of Health. The lap pipe shall be coated in and out in the same manner. The casing

supplier shall document on his stationary and signed by a principle of the company that the casing is A 53/API 5L.

G. UNDERREAMING:

After the cement has been allowed to set and harden, the underream hole shall be a minimum of 16 inches larger than the nominal screen diameter. The under ream shall extend through the entire length of the water bearing strata to be screened.

H. LAP PIPE:

The lap pipe shall extend from the top of the Well screen up into the outer casing a distance of not less than 80 feet. The lap pipe shall be of black steel, epoxy coated material, of the same size as the Well screen and standard wall thickness, and shall be A53 or API 5L. The space between the lap pipe and the casing should be filled with specially graded gravel according to the sieve analysis to prevent sand pumpage.

I. WELL SCREEN:

Into the under reamed hole shall be placed a screen, or strainer, approximately 80 feet in length. It shall be placed in the center of the large under reamed hole using guides as necessary. The screen shall be not less than 12 inches in diameter and shall be made of AISI, Type 304, and stainless steel. The openings shall be horizontal, and vertical openings will NOT be permitted. Slot opening size shall be determined from analysis of the sand from the water-bearing strata. The screen shall be as manufactured by Johnson, Houston, Cook or equal. The minimum support rod size will be .250 inches. The minimum wrap wire size will be .180 inches. The Contractor will verify with the Engineer that the proposed screen is of adequate column and collapse strength and has a transmitting capacity of 1500 G.P.M. at a 0.1 foot per second entrance velocity for the Well. The screen manufacturer shall document on their stationary that the screen meets these specifications.

J. GRAVEL ENVELOPE WELL DEVELOPMENT:

Gravel Envelope: The entire annular space between the strainer and the outside wall of the under reamed hole through the water bearing formation shall be completely filled with a graded and well rounded gravel of proper size as determined by the sand analysis to permit to free flow of water to and through the screen without Well clogging or Well sanding. The Contractor shall submit to the Engineer before graveling the gradation and type of gravel to be used. He shall also show the uniformity coefficient of the gravel in relation to the uniformity coefficient of the water bearing formation. The Owner shall have the right to accept the Contractor's recommendation or

designate to the Contractor the gradation and type of gravel to be used. The thickness of the annular gravel envelope should be between 3 inches and 8 inches to allow complete development of the well.

Well Development: The Well is to be surged and developed in insure maximum capacity and long life. This developing is to continue until the water is clear and free of sand shield it is being pumped at the guaranteed capacity. The Contractor's Hydrologist shall determine the Well efficiency using recognized methods. If the Well is less than 75% efficient at the specified pumping rate at the end of 24 hours, the Contractor shall continue development operations at his own expense to improve the Well's efficiency until it equals or exceed 75%. If the Contractor is unable to meet the 75% efficiency requirement, the Owner will reduce the payment to the Contractor by one (1%) percent of the Contract for each percentage point below 75% that is attained by the Contractor. If the Contractor does not develop a minimum of 60% Well efficiency, no payment shall be due the Contractor for the Well.

L. PROVISIONS FOR DISINFECTIONS:

1. All water used in the drilling and construction process shall be obtained from the sources or proven satisfactory quality and shall meet the primary standards of the Safe Drinking Water Act Regulations.
2. Gravel to be placed in a well should be disinfected with a solution of at least 50 mg/l free chlorine. A residual of no less than 5 parts per million of chlorine shall be maintained in any water used for development.
3. Upon completion of the well, the well and adjacent aquifer shall be disinfected as necessary using a solution of 50 mg/l free chlorine applied for 24 hours. After disinfection, the well shall be pumped until two consecutive chlorine-free samples are collected from the wells which show no coliform bacteria and no confluent growth. The samples shall be collected, submitted and analyzed according to the Mississippi State Department of Health requirements. The second sample shall be collected following at least two hours of continuous pumping after the first sample. A disinfectant must not be applied between samples. The person collecting the official microbiological sample(s) must be a representative of the Mississippi State Department of Health, the Licensed Professional Engineer for the project, or the Certified Waterworks Operator for the public water supply.
4. If water from a private well is used, microbiological samples shall be examined prior to use. Routine samples from public supplies may be used as a basis for determining if a supply is satisfactory.
5. The disinfection procedure should meet the current AWWA standard (C654). Solution strength of 50 mg/l free chlorine applied for 24 hours is recommended.

6. When a well has been repaired, such as lowering or replacing the pump, the well should be disinfected. At least two (2) microbiological water samples, taken 2 hours apart with the well pumping continuously, MUST be obtained prior to placing the well back in service. NO COLIFORM BACTERIA SHOULD BE PRESENT IN THESE SAMPLES. If coliform is present, the well should be re-disinfected and re-sampled.

M. WELL TEST:

When the Well is completed and thoroughly developed, the Contractor shall furnish, install and operate a test Pump complete with prime mover, water-level measuring device and pipe orifices for accurately measuring the pumping rate. A maximum 1500 minute aquifer test with continuous pumping shall be conducted at a constant rate of pumping at the specified Well design capacity. Measurements during the test will be made at the time intervals designated by the Engineer. After the pumping portion of the test has been completed, measurements of the recovery of the water level shall be made at the designated time intervals for an eight (8) hour period or until the water recovers to the original static water level, whichever occurs first. The Pump shall not be removed during this recovery period. The Well discharge water shall be conducted to a site as instructed by the Engineer. The Contractor shall not be responsible for the discharge water after it leaves the Owner's property.

N. CAPPING:

After development, the Well shall be capped by welding on a ¼ inch steel plate or in a manner approved by the Engineer. Before capping, it shall be sterilized by adding a fifty parts per million (50ppm) chlorine solutions for adequate sterilization.

O. EQUIPMENT:

1. Motor shall be 480 volt, 3 phases, of the vertical hollow shaft squirrel-cage induction type, and shall comply with ASA Specification C-70. The motor will be manufactured by U.S. Motors, a division of Emerson Electric. The electric motor shall also conform in construction and performance with the NEMA standards for electric motors, latest revision, and shall be rated as drip-proof; 40 degrees Centigrade rise design, with 1.15 service factor, and is weatherproof. Motor shall be of the proper size to drive the Pump continuously over the specified operating range without the load exceeding the nameplate rating. Motor shall be minimum rated horsepower so as not to be overloaded at any point of the Pump curve.

The connection between the motor and the Pump shaft shall be through a coupling of clutch of the non-reverse ratchet type in the motor head to prevent line shaft from unscrewing the event of phase reversal. A thrust bearing of ample capacity to

carry the weight of all rotating parts, plus the hydraulic thrust shall be incorporated into the meter as an integral part. The bearing shall be of such a size the average life rating is no less than five (5) years continuous operation. The motor base shall have an opening in the side for easy access to bearing covers. The motor shall be provided with an anti-reversing ratchet.

2. Pump Bowl Assembly: The Well constructed under this contract, after having been cleared of all sand and mud, shall be equipped with a deep Well water lubricated, turbine type Pump, complete with Pump column, line shafting, flanged discharge pipe connection, and all other accessories and appurtenances required for the proper operation of the equipment. The Pump shall be designed to operate at a speed not greater than 1800 rpm and to deliver not less than 1500 G.P.M. measured at the centerline of the above ground discharge outlet and a pressure of not less than 40 psi above ground for the well. The permanent pump bowls should be set to maintain a 30 foot minimum submergence after pumping for 24 hours at open discharge. The Pump Bowl Assembly shall consist of enclosed type impellers capable of producing, per impeller, the following minimum performance characteristics:

WESLEY WATER WELL

G.P.M.	HEAD/STAGE	EFFICIENCY
1600	102'	79%
1800	96'	81%
2000	89"	83.5%
2200	80'	82%
2400	70'	77%
Shutoff Head	152'	
Pump Specific Speed	2750 ffl 2%	
Minimum first stage weight 520 lbs.		
Minimum additional stage weight 200 lbs.		

3. Pumps bowls, suction and discharge cases shall be of close grained nickel aluminum bronze, ASTM 148, Alloy 958, without imperfections. Leaded red brass, tin bronze or silicone bronze will not be accepted. For Pump sizes 8 inch through 19 inch, the

bowl water passage shall be porcelain enamel coated to provide optimum performance and consistency of output. The top case bearing shall be marine type, fluted rubber cast in bronze tube. Bowls and cases shall have bronze sleeve type bushings to support and guide the shaft. Bushing material shall be bronze ASTM B-505, Alloy 836. The suction case bearing shall be grease packed with provision for grease circulation from a reservoir in the suction case hub. A sand collar or rubber or bronze, ASTM B-505, Alloy 836, shall be provided to protect the suction case bearing from abrasives in the liquid pumped. The discharge case shall have vanes to deliver the flow of water with minimum turbulence. The intermediate stages shall be selected to provide the maximum efficiency with least number of stages. Impellers shall be of the enclosed type, cast of bronze, ASTM B-148, and Alloy 953, nickel aluminum bronze accurately cast, machined, balanced, and filed for optimum performance and minimum vibration. The design shall be non-overloading for the capacity of the motor selected. The impeller shall be securely fastened to the bowl shaft with taper collets of ASTM A-582, Grade 416, and stainless steel. Bowl shaft shall be of 2-3/16" diameter to transmit the Pump horsepower with a liberal safety factor and rigidly support the impellers between the bowl -and case bearing. The bowl shaft material shall be of Stainless CR NI MN Alloy, ARMCO STEEL TN "Nitronic 50". The bowl shall be Byron Jackson Model 15 MQL. No other bowl will be considered without a letter signed by the Chief Engineer of the proposed alternative manufacturer stating that the proposed alternative Pump meets this specification in every respect.

4. Suction Pipe: Contractor shall furnish, with the Pumping unit, a 20-foot section of black steel, ASTM A-53, Grade B, suction pipe, 10-inch diameter, threaded for attaching to the Pump.
5. Column Assembly: Column pipe shall be of ASTM A53, Grade A steel pipe. Ends shall be machined with 8 threads per inch with a 1/8 inch taper and faced parallel to butt against machined shoulders in the column couplings. Intermediate sections of column shall not exceed 10 feet. Top and bottom sections of column pipe shall not exceed 5 feet. The upper end of bottom and intermediate column pipes shall be fitted with coupling of ductile iron. The coupling will have an integrally cast spider hub to hold and accurately align the shaft. Line shafts will be of ASTM A108, Grade 1045, steel ground and polished with a surface finish not to exceed 40 RMS. The shaft diameter will be a minimum of 1-15/16 inches. Each shaft shall have 304 stainless steel sleeve. Intermediate shaft sections shall be interchangeable and shall not exceed 10 feet in length. The butting ends shall be machined square to axis of the shaft and faces shall be recessed to ensure proper contact. The shaft couplings shall be threaded from solid ASTM A-276, Grad 316SS steel bars, and designed with a safety factor 1-1/2 times the shaft safety factor. Threads shall be left hand to tighten during Pump Operation. The couplings shall be without vent holes.

The discharge column shall consist of an outer pipe, line shaft, bearings, and couplings. The column pipe shall be 12 inch standard weight column conforming to ANSI B, and shall have a screw coupled connection for each 10 feet of pipe length. The couplings will be ductile iron combination couplings with alignment spiders cast integrally into each coupling.

6. **Pump Discharge Head:** A suitable Pump head of high grade cast iron ASTM A48, Class 30, shall be provided for mounting the motor and supporting the Pump column, bowls, and suction pipe. The above ground outlet shall be flanged, provided with a circular groove interfaced for square packing, and drilled to match ANSI class 125 cast iron for 150 steel flange connections. The discharge nozzle shall be constructed with a vertical vane for reduction of turbulence. Also, the discharge flange shall have a 1/4 inch NPT connection for a pressure gauge. The design shall permit the drive shaft to be coupled above the tension box to facilitate easy removal and replacement of the drive. The cast iron stuffing box shall be of the bleed off type with a bronze packing glade. A Tight Joint is required between the well casing and pump head. The Pump head shall be equipped with a separate cast iron base plate designed so as to permit the extension of the Well head casing up into the base plate at least one (1) inch. The base plate shall be grouted permanently into the concrete foundation. The Pump head shall weigh at least 750 pounds, not including the base plate and support a setting load of at least 40,000 pounds for the well.

WELL AND PUMP DATA SHEET

TEST HOLE:	Minimum 800 feet
CASING:	16" Diameter, Approximately 820 feet
SCREEN:	12" Diameter, Approximately 80 feet
UNDERREAMED HOLE:	Minimum 28" Diameter

PUMP:

1 Nominal 1500 G.P.M. at 40 psi above ground head
2 12' x 1-15/16" CS shaft w/SS couplings column Assembly required. Ductile iron column couplings Required with integrally cast spiders.

7. Discharge Pipe: The Contractor shall install, at the discharge of the Well, the fittings and accessories shown on the Well Data Sheet of Plan Detail Sheet and specified herein.
8. Gate Valves shall be AWWA, non-rising stem iron body, bronze mounted, tested to 350 psi. Valves shall open by turning counter clockwise, be equipped with "O" ring seals at the top of the stem and a hand wheel. The valves shall be Eddy-lowa, Mueller, N&H, or approved equal.
9. Check Valves shall be 125 psi rated, non-slam, as manufactured by Clayton (No. 81), Mueller, GA Industries (No. 250-D), or approved equal.
10. Pressure Gauge shall have an iron body and be calibrated in pounds per square inch in not more than 2 pound increments from zero to 50 pounds in excess of the discharge pressure. Gauge shall be equipped with a shut-off cock and be connected to the discharge pipe with ½ inch galvanized pipe.
11. Air Release Valve shall be Crispin Universal, with Protector, or approved equal.
12. Master Meter shall be Water Specialties Model ML-04 or approved equal.

B. TESTING:

When the Contractor has completed the installation of the permanent pumping equipment and has the installation ready for testing, he shall notify the Engineer. The test shall run continuously for a twenty-four (24) hour period, or a minimum of four (4) hours after the Well has stabilized. Reasonable stops for adjustment of equipment and measuring devices shall be allowed during this period. The Well and Pump shall be tested at the guaranteed capacity as measured at the centerline of the discharge flange at the specified pressure.

Hourly readings shall be recorded of the capacity and draw-down of the Well during the entire test period. A step test run from open discharge to shut off head shall be run in increments of ten (10) psi. Signed copies of the test results shall be supplied to the

Owner immediately after completion of the test. The Contractor shall furnish the necessary equipment to conduct this test.

CITY OF HATTIESBURG

WELL DATA SHEET

Outer Casing Diameter	16"; 0.500" Wall Thickness
Lap Pipe Diameter	12"
Lap Pipe Length	80'
Coating Required	Yes
Minimum Screen Diameter	12"
Minimum Screen Length	80'
Estimated Well Depth	820'
Required Discharge Flow	1500
Required Discharge Head	40 psi
Well Development (Natural or Gravel)	Gravel
Type of Pump (Line Shaft or Submersible)	L.S.
Type of Lubrication (oil or water)	Water
Discharge Fittings & Accessories	
(a) Dresser Coupling	1-12"
(b) Standard Flanged Check Valve	1-12"
(c) Standard Flanged Tee	1-12"
(d) Standard Flanged Gate Valve	1-12"
(e) Standard Flanged Cross	N/A
(f) Standard Flanged 45 Degree Ell	12"
(g) Standard Flanged 90 Degree Ell	N/A
(h) Standard Flanged D1 Pipe	12"
(i) Air Release Valve	1 – 2"
(j) Standard Hose Bid	1-3/4"
(k) Standard Pressure Gauge	1-6"
(l) Master Meter	12"
(m) Tie-In	One

DUCTILE IRON WATER SYSTEMS

1.0 GENERAL

This item shall consist of furnishing all of the necessary materials, supervision, labor, tools, equipment and incidentals, and the installation of various types and sizes of water pipe and related items in accordance with the Contract Drawings and Specifications, as stated in the Proposal.

2.0 APPLICABLE PUBLICATIONS

The following publications form a part of these Specifications and where referred to by basic designation only, are applicable to the extent indicated. The latest editions of the publications referenced shall apply to the work.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A 139 Electric-Fusion (Arc) welded steel pipe (sizes 4 inch and over).
- A 252 Welded and Seamless steel pipe piles.
- C 31 Making and Curing Concrete Compressive and Flexural Strength Test Specimens in the Field.
- C 33 Concrete Aggregates
- C 39 Test for Compressive Strength of Cylindrical Concrete Specimens.
- D 2922 Density of Soil Aggregate in place by the clear Method (shallow depths).

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- 21.10 Gray Iron and Ductile Iron Fittings, 3 inch through 48 inch for Water and other Liquids.
- 21.11 Rubber Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings.
- 21.50 Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-line Molds, for Water or other Liquids.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

C 104 Cement-Mortar Lining for Cast Iron Pipe and Fittings for Water and Other Liquids.

C 106 Cast Iron Pipe Centrifugally Cast in Metal Molds, for water and other Liquids.

C 110 Gray Iron and Ductile Iron Fittings, 3 inch through 48 inch, for Water and Other Liquids.

C 111 Rubber Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings.

C 150 Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or other Liquids.

AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS (AASHTO)

T-88 Particle Size Analysis of Soils.

T-89 Determining the Liquid Limit of Soils.

T-90 Determining the Plastic Limit and Plasticity Index of Soils.

T-99 Moisture Density Relations of Soils Using a 5.5 lb. Rammer and 12 inch Drop.

T-191 Density of Soil In-Place by the Sand-Cone Method.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Standard Specifications for Road and Bridge Construction 2004 Edition.

3.0 SUBMITTALS

The following submittals shall be required for the respective materials used in the work. All submittals shall be submitted through the Contractor to the Engineer.

3.1 Ductile Iron Pipe: The following submittals shall be required for ductile iron pipe systems utilized on the project. The Contractor shall furnish manufacturer's certificates certifying that the pipe and fittings conform to the requirements as

Specified hereinafter under Article 4.0, Materials. In addition, the submittals shall include the following:

A. Joints: The following shall be required for ductile iron joints.

1. Drawings or Manufacturer's Catalogue data indicating dimensions and tolerance.

2. Gaskets shall be tested in accordance with the respective standards as indicated in ANSI 21.11 and results shall be included in the submittals. Test shall be for similar materials on the gaskets and be not more than one year old.

3. Mechanical Joints: Should the Contractor elect to use mechanical joints in lieu of push-on joints, manufacturer's data shall be submitted in accordance with the "Special Requirements for the Mechanical Joint" as stated in ANSI 21.11 (AWWA C 111).

B. Ductile Iron Pipe Submittal Shall Include the Results of:

1. Tension Test
2. Impact Test
3. Low Temperature Impact Test

Sampling procedure shall be as indicated in ANSI 21.51.

4.0 MATERIALS

WATER SYSTEM:

A. Ductile Iron Pipe: Ductile iron pipe shall be designed in accordance with the latest revision of ANSI/AWWA C 151/A21.51), rated working pressure of 350 psi plus a 100 psi surge allowance; a 2 to 1 safety factor on the sum of working pressure plus surge pressure in Type 3 Laying condition with a depth of cover as required per plans.

Pipe shall have standard asphaltic coating on the exterior. Pipe also shall have a cement mortar lining on the interior in accordance with the latest revision of ANSI/AWWA C104/A21.4. If corrosion protection is required, polyethylene encasement shall be installed prior to the pipes installation in accordance with ANSI/AWWA C105/A21.5-88.

All non-restrained pipe shall be furnished with push-on type joints such as "Fastite; or equal. Joints shall be in accordance with the latest revision of ANSI/AWWA C111/A21.11 and shall be furnished complete with all necessary accessories.

Where restrained joint pipe is required, "Fast Grip", "Flex-Ring", or "Field Flex-Ring" or approved equal shall be used. The length of restrained pipe shall be as tabulated or noted on the plans.

Ductile iron fittings shall conform to the latest revisions of either ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53. Fittings, linings, and coatings shall be as specified for the pipe above.

All pipe, fittings and accessories shall be installed and tested in accordance with the latest revision of AWWA C600. Newly installed ductile iron water mains shall be disinfected in accordance with the latest revision of AWWA C651 prior to placing in service.

B. Gate Valves: Where indicated on the Plans or directed by the ENGINEER, the CONTRACTOR shall furnish and install gate valves as hereinafter specified.

All gate valves shall be cast iron mechanical joint, M.J., Mueller A-2380-20, equivalent or better.

All gate valves shall be furnished with O-ring packing and 2" square operating nut, AWWA 200lb., for cast iron water main.

Valve boxes shall be cast iron top and bottom. Extension pieces shall be provided as required.

All valves will be set at a perfect 90 degree angle from level pipe, (perpendicular) so as to be easily accessible through properly set valve box as per specifications above.

The CONTRACTOR shall furnish and install either a two-piece or three-piece, slip type, cast iron valve box over each gate valve. Valve boxes will be set over valve operating nut, centered so as to be easily accessible with a valve operating wrench or key. They will be set to correspond with the finished grade of street, lot, or easement. No dirt will be left in box; box will not rest directly on valve body.

C. Fittings, Valves and Hydrants, Etc.: All fittings, valves and valve boxes, hydrants, and other appurtenances are to be set at the points indicated on the plans, or as directed by the ENGINEER, and omission to do so shall be corrected by the CONTRACTOR without extra cost to the OWNER.

All fitting shall either be Ductile Iron Compact (ANSI/AWWA C153/A21.53) or Cast Iron (ANSI/AWWA-C110/A21-10) and shall have mechanical joint ends and

mechanical joint restraints (Series 1120) and shall be incorporated in the design of the follower gland and shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Flexibility of the joint shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A 536-80. Restraining devices shall be of ductile iron heat treated to a minimum hardness of 370 BHN. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSI/AWWA A21.11 and ANSI/AWWA C153/A21.53 of latest revision. Twist-off nuts shall be used to insure proper actuating of the restraining devices.

The mechanical joint restraint device shall have a working pressure of a least 250 psi with a minimum safety factor of 2:1 and shall be EBAA Iron., MEGALUG or equal.

To improve the sealing capacity, the gaskets for all mechanical joints conforming to the requirements of ANSI/AWWA C110/A21.10, C111/A21.11, or C153/A21.53 shall be of a design that causes the gasket to deflect approximately 30% during assembly of the mechanical joint. The gasket material shall conform to the requirements of ANSI/AWWA C111/A21.11, Section 1-6.4 of the latest revision. Mechanical joint gaskets shall be EBAA Iron's EBAA Seal- Improved Mechanical Joint Gasket or approved equal.

Fittings (bends, tees, plus, and caps) shall be securely braced by mechanical joint restraints, as indicated on the Plans, to prevent the possibility of blowing off under pressure. And a full length of pipe shall be installed on each end of the fitting. Then cut pieces can be installed beyond the full lengths of pipe.

D. Plugs and Caps: Where indicated on the Plans, or as directed by the ENGINEER, the CONTRACTOR shall install plugs for anticipated future extensions by placing a branch fitting (tee or cross) in the line and plugging the unused branch or branches. In general, such plugs will be located at street intersections where present plans provided lines running in only two or three directions from the intersections and where, in the opinion of the ENGINEER, a connection may be required for future extension. Where "dead end" lines are installed, the ends of such lines shall be plugged or capped as required.

For the various hot taps required according to the plans, and up to 12 inches, the JCM 432, stainless Tapping Sleeve shall be required. The CONTRACTOR shall furnish all materials for these various taps and the OWNER will actually make the tap.

E. Casing Pipe: Steel pipe utilized as casing at locations shown on the Contract Drawings shall be new round piling pipe conforming to the requirements of ASTM

A 252 or A 139. Casing diameter shall be adequate to allow pushing of the specified diameter of water pipe and make proper connections at the ends. Minimum Wall Thickness for steel casing is 0.500 inch.

F. Stabilization Material: Stabilization Material shall be a pit run mixture of sand and gravel. The sand shall be hard, sharp and durable particles. All gravel shall pass a 12" sieve.

G. Wash Gravel Bedding Material: Select Granular material for pipe bedding shall be coarse concrete aggregate. The coarse concrete aggregate shall conform to the gradation sizing Number 467 specified in Table 2 of ASTM Standard Specification C-33. (See Following Table)

<u>SIZE NO. 467</u>	
<u>Nominal Size</u> <u>(Sieves w/Square Openings)</u>	<u>Percent Passing by Weight</u>
2"	100
12"	95 - 100
3/4"	35 - 70
3/8"	10 - 30
No. 4	0 - 5

H. Select Backfill: General: The select material shall be composed of a natural or artificial mixture of sand, silt, clay or soil binder or other material of satisfactory cementing value. The sand shall be hard, sharp, and durable particles, preferably siliceous. The binder shall be a grade of clay or other material having satisfactory cementing qualities and shall be homogenous in character, free from vegetable matter, clay balls or other deleterious substances that cannot be classed as serviceable base material.

Gradation: Any coarse aggregate contained in the material shall pass the one and one-half (1-1/2), sieve and not more than thirty-five percent (35%) shall be retained in the Number 10 sieve. The plasticity index (P.I.) shall not exceed 12, nor shall the liquid limit exceed 30.

The composite selected sand-clay material passing the Number 10 sieve shall conform to the following minimum and maximum gradation limits:

<u>Sieve</u>	<u>Percent Passing by Weight</u>
Number 40	40 - 85
Number 60	30 - 70

Number 270	8 - 30
Silt (.05 to .005 mm)	3 - 15
Clay (Passing .005 mm)	3 - 15

I. Backfill: All other backfill shall consist of excavated material removed from the trench.

5.0 CONSTRUCTION:

Earthwork:

A. Site Preparation: Topsoil shall be stripped and stockpiled in accordance with Technical Specifications - Restoration of Roads, Driveways, Fences, Lawns, and other Grassed Areas and Excavation, Trenching and Backfilling.

All vegetation such as brush, heavy sod, heavy growth of grass, decayed vegetative matter, rubbish and any other unsuitable material within the area of trenching shall be stripped or otherwise removed before the trenching is started, and in no case shall such objectionable material be allowed in the trench.

Stripping operation shall be to a depth of not less than 6 inches in all cases.

B. Asphalt or Concrete Removal: Before trenching operations begin, the existing asphalt or concrete pavement shall be scored or cut to a proper depth to give a straight vertical edge when removed. The asphalt or concrete shall be disposed of offsite by the Contractor. While removing the asphalt or concrete in the trench line, never shall the adjacent asphalt be raised or pulled from its base.

C. Trenching: The Contractor shall determine all requirements for trench dimensions, alignment, and grades. The trench shall be excavated in conformance with all federal, state and local regulations for the protection of the workmen. Shoring, sheeting and/or a moveable form shall be used as required to provide earth stability during the laying operations.

The final excavation of the trench for the pipe installation shall be as indicated on the Plans. Minor variations in horizontal (within the permanent easement) or vertical alignment during construction shall be made during construction (with the Engineer's approval) to facilitate ease of installation and operation (due to potential conflicts; i.e., utility conflict) at no additional cost to the Owner except for additional piping, if any. The trench from the top of the pipe down to the bottom of the bedding shall be of a consistent width as indicated on the plans. Should the excavated width of the trench be larger than the design width, the Engineer may direct that a higher type or class of bedding be used; or other adjustments be made to increase the load carrying capacity of the pipe.

The Contractor shall not excavate more trench in advance of pipe laying than is necessary to perform the work efficiently. No more than 100 feet of open trench shall be allowed unless approved by the Engineer.

Excavated material shall be placed in a manner that will not obstruct sidewalks, driveways, or other structures. Excavated material shall not be placed so as to surcharge the walls and jeopardize trench stability.

D. Disposal: The Contractor shall satisfactorily dispose of all excess earth from excavations either in approved (by the Engineer) areas within the construction limits or away from the project in disposal sites obtained by the Contractor.

The Contractor will be permitted to mound excess earth over the trench to a maximum depth of 12 inches above the original ground surface or finished grade where the trench is located in unimproved property. Wasting of excess excavated material will not be permitted within any road ROW. All material within the construction limits shall be placed so that natural drainage is maintained and the surface shall be graded to a smooth and uniform appearance. The disposal of waste and excess excavating materials, including hauling, handling, grading, and surfacing shall be subsidiary obligation of the contractor and no separate payment will be made. Therefore, the cost of such work shall be included in the Contract Unit Price for installation of water pipe.

E. Dewatering: The site shall be kept free of surface water at all times. The Contractor shall install drainage ditches and dikes and shall perform all pumping and other work necessary to divert or remove rainfall and other accumulations of surface water from the excavations. The diversion and removal of surface water performed in a manner that will prevent the accumulation of water behind temporary structures or at any other locations within the construction area where it may be detrimental. The Contractor shall provide, install, and operate sufficient trenches, sumps, pumps, hoses, piping, well points, deep wells, etc., necessary to depress and maintain the ground water level at least one foot below the base of the excavation during all stages of construction operations. The ground water table shall be lowered in advance of excavation and maintained a minimum of one foot below the lowest excavation subgrade made until the structure has sufficient strength and weight to withstand horizontal and vertical soil and water pressures.

Where groundwater is encountered, the Contractor shall make the effort necessary to secure a dry trench bottom before laying pipe. In sandy and in other suitable type soils, dewatering shall be done by well pointing. If, in the opinion of the Engineer, the Contractor has failed to obtain an absolutely dry trench bottom

by insufficient use of all known methods of trench dewatering, the Engineer may order the Contractor to excavate below grade and place not less than 6 inches of graded crushed stone fill material over the trench bottom to form trench drains to suitably located sumps and to remove the water by bailing or pumping. The graded crushed stone fill material shall be placed at the Contractor's own expense and shall be of such depth that there shall be not water in bell holes at the time of coupling pipe. All costs of equipment, labor, and materials required for dewatering shall be included in the bid price.

F. Bedding: The Contractor shall satisfactorily shape the trench area (to specified line, grade and cross section) to receive bedding material. The bottom of the trench shall be undisturbed soil. Should the Contractor over excavate the trench without direction from the Engineer, the trench shall be brought up to grade with select backfill and compacted to at least 90% of maximum laboratory density as measured by AASHTO T 99. Such additional work and materials for over excavation without direction of the Engineer shall be at the expense of the Contractor.

Holes for the bells shall be provided at each joint in the sub-grade or in the granular fill bedding material as required. The holes shall be no larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the material. The Contractor shall install the proper bedding for the respective type of pipe and depth of installation as shown in the details and schedules on the plans. When depths vary in a particular manhole run, the Contractor shall change bedding systems in accordance with the depth installation requirements.

1. Stabilization Materials: When the sub-grade is found to be unstable or to include ashes, refuse, organic material, or other unsuitable material, the Engineer may direct that the sub-grade be over excavated to remove such material. The depths of over excavation shall be as directed by the Engineer. Stabilization material shall be placed into the over excavated area of the trench and shall be paid for in accordance with these specifications. Stabilization shall be compacted to at least 90% of maximum laboratory density in six inch lifts.

2. Bedding Materials: As detailed in the plans, bedding material shall be placed to the specified depth below the pipe and tamped to a minimum of 90% of maximum laboratory density as determined in accordance with AASHTO T 99. Following placement of pipe, additional bedding material shall be placed and consolidated under the haunches of the pipe. Special tools shall be required to work the material into place and leave no voids beneath the pipe. The bedding material shall be tamped along the spring line (or along the top of the bedding material as indicated) of the pipe to sufficiently compact the material insofar as practical.

The Engineer may direct additional moisture be added to the bedding material to aid in the compaction effort. Mechanical tampers may be employed to aid the process. Depending on the particular bedding required, additional bedding shall be added and tamped to minimum of 90% of maximum laboratory density, with AASHTO T-99.

3. Select Backfill: Select backfill shall be placed in 6 inch lifts and tamped to a minimum laboratory density with AASHTO T-99. Overall depth of the select backfill shall be as directed by the Engineer.

4. Normal Condition Bedding: Under normal conditions the trench bottom shall be undisturbed earth shaped to the specified line, grad, and cross section with proper bell holes at each joint to insure that pipe barrel lies flat on trench bottom. The bedding material will be selected native materials excavated from the trench and placed in two lifts. The first lift being placed up to the spring line of the pipe and extending out to the trench walls and hand tamped to a minimum of 90% of maximum laboratory density. Special care shall be used in placing and tamping bedding to insure no voids under the haunches of the pipe. The second lift shall extend to approximately 6" above pipe (Material permitting) and hand tamped to 90% density.

5. Backfilling: Upon completion of placement of select material the excavated materials shall be immediately placed back into the trench. Specific requirements are:

a. Backfill requirements for road crossings, parking lots, driveways, and sidewalks shall be in accordance with Technical Specifications - RESTORATION OF ROADS, DRIVEWAYS, FENCES, LAWNS AND OTHER GRASSED AREAS AND EXCAVATION, TRENCHING AND BACKFILLING.

b. Backfill requirements for unimproved areas (pastures, wooded areas) shall consist of placement and shaping of the soil in such a manner as to allow maximum natural consolidation. No compaction of the general backfill in the unimproved areas will be required, except that caused by conventional shaping equipment.

c. No debris shall be used as backfill which has a volume in excess of one-half of one cubic foot or a weight excess of 75 pounds.

6. Sheeting Removal: Wooden sheeting or other thick sheeting or shoring members which have been driven or otherwise placed along the trench walls to an elevation below the spring line of the pipe shall be cut off at the spring line or higher and left in place.

7. Grading and Grassing: Final grading and grassing shall be in accordance with the proposed Vegetation Schedule provided in the construction plans.

F. PIPE HANDLING AND STORAGE: Pipe shall be handled, staked, and stored in accordance with manufacturer's printed literature. The Contractor shall provide security as required to prevent damage by vandals. PVC pipe shall be shaded from sunlight for extended lengths of time. Pipe damaged during storage and handling shall be rejected.

G. PIPE LAYING: Each pipe shall be laid true to line and grade and in such manner as to form a close concentric joint with the adjoining pipe and to prevent sudden offsets of the flow line. As the work progresses, the interior of the water shall be cleared of all dirt and superfluous materials of every description. Where cleaning after laying is difficult because of small pipe size, a suitable swab or drag shall be kept in the pipe and pulled forward past each joint immediately after the jointing has been completed. Trenches shall be kept free of water and pipe shall not be laid when the condition of the trench or the weather is unsuitable for such work. At times when work is not in progress, open ends of pipe and fittings shall be securely and satisfactorily closed so that no trench water earth, or other substance will enter the pipe or fittings. The minimum depth of water mains shall be 30 inches below finished grade to the top of the water main.

Pipe laying shall be performed in such a manner that no foreign material enters the pipe. The Engineer may require that before lowering pipe, heavy canvas bags be placed over each end, and left in place until joints are ready to be made. If water is in the trench, the seals shall remain in place until the trench is pumped completely dry. If conditions are unsuitable, no pipe shall be laid until satisfactory laying conditions are obtained in accordance with the above specified requirements.

H. PIPE JOINTING: Piping shall be jointed in accordance with the manufacturer's printed recommendations. Gaskets shall be firmly set within the bells and grooves as required. The manufacturer's recommended lubricant or an approved equal shall be applied for slip type joints.

Ductile Iron Pipe Joint Construction: The installation and jointing of ductile iron pipe shall generally conform to the applicable provisions of AWWA Standard Specifications C-600 for pipe laying.

Where mechanical joint pipe is used, the surfaces which come in contact with the gasket shall be thoroughly brushed with a wire brush just prior to assembly. The gasket should be brushed with soapy water prior to installation to remove loose

dirt and to lubricate gasket as it is forced into its retaining space. When tightening bolts, it is essential that the gland be brought up toward the pipe flange evenly. The bolts should be partially tightened; the bottom bolt first, then the top; next the bolts on either side; and last, the remaining bolts. Overstressing of bolts to compensate for poor installation will not be permitted. Bolt torque shall be in accordance with manufacturer's specifications.

All joints of whatever type shall be completely water tight after being subjected to the required tests.

I. BORINGS: Borings shall be accomplished in accordance with Mississippi State Highway Department Standards. The contractor shall provide all necessary sheeting, bracing, cribbing, supports and appurtenances to insure the proper line and grade throughout the entire length of the crossing.

1. Casing Pipe: Casing Pipe shall be installed as indicated on the Contract Drawings. Joints shall be completely welded to provide structural integrity and shall be watertight.

2. Carrier Pipe: Carrier pipe may be any of the allowed options of piping. However, the piping and joints shall be capable of withstanding the stress exerted by pushing the pipe within the casing.

3. Carrier Pipe Supports: Supports for the carrier pipe shall be as recommended by the manufacturer for such installation. Supports shall be spaced to adequately support the piping under all conditions.

4. Casing Seal: The annulus between the casing and carrier pipe shall be sealed at each end by installing WMSON Type U end seals, as manufactured by T.D. Williamson, Inc. Tulsa, Oklahoma, or equal, in accordance with the instructions of the manufacturer of the seals.

J. Separation of Water and Sewer Mains:

1. Water mains shall be laid at least 10 feet horizontally and 18 inches vertically from any sanitary sewer or manhole. The bottom of the water line shall be a minimum of 18 inches from the top of the sewer line.

K. INCIDENTAL CONCRETE:

1. GENERAL: The following specifications shall apply to any and all items of incidental work with Portland Cement with or without reinforcement, including such items as concrete piers to support cast iron pipe above ground, erosion control bulkheads or structures, cradles and encasement, blocking and the like.

All concrete used in the construction of this project shall comply with the requirements herein specified for its particular class and kind.

2. MATERIALS: All materials used in this work shall consist of (a) Portland Cement, (b) Sand, (c) Gravel, and (d) Clean Water.

(a) The cement used shall be domestic manufacture, either "Standard" or "high Early Strength" Portland Cement, which shall meet all the requirements of the current A.S.T.M. Specifications for the type used at the time it is incorporated in the work.

(b) The fine aggregate shall consist of clean, sharp sand, well graded from coarse to fine, consisting of hard, durable particles, free from coarse to fine, consisting of hard, durable particles, free from silt, salt or organic matter. It shall meet all the requirements of the ASTM Specifications C33, Paragraph 1, 2 and 3, and ASTM C-40.

(c) The coarse aggregate used shall consist of clean washed gravel, free from particles of wood or lumps of clay. Not more than 10% shall pass the No. 4 sieve, and it shall conform with the requirements of ASTM Specifications C33, Paragraph 5 to 8 inclusive.

(d) The water used for mixing concrete shall be clear, free from oil, salt, strong acid, alkali organic matter, and shall be approved by the Engineer.

(e) Reinforcing steel shall conform to the requirements of the "Standard Specifications for Billet-Steel Concrete Reinforcing Bars" of intermediate grade (Serial Designation: A 15-39) or the Standard Specifications for Rail-Steel Concrete Reinforcement Bars (Serial Designation; A-16-35) of the American Society for Testing Materials.

3. CONSTRUCTION METHODS:

All concrete materials shall be as handled and stored that they will not become damaged after delivery at the site. The cement shall be thoroughly protected from the weather, and the sand and gravel, shall be so stored that they will not become intermixed, and so as to prevent the admixture with either of any foreign materials. Reinforcing steel shall be so stored that it will not come in contact with the ground, shall be protected from the weather, and shall be clean and free from rust when incorporated in the work.

Concrete materials shall be mixed in the proportions and in a manner that will produce concrete of the class and strength specified to its use.

Unless indicated otherwise, all concrete shall be Class A which shall have a crushing strength of not less than 3,000 pounds per square inch at 28 days, as determined by the Standard Methods for testing concrete materials.

Class B concrete, which shall have a crushing strength of not less than 2,500 pounds per square inch at 28 days, and shall be used for erosion control bulkheads and blocking pipelines at bends to prevent blowing off under pressure.

Class C concrete, which shall have a crushing strength of not less than 2,000 pounds per square inch at 28 days, shall be used for cradles and encasement and may be used for backfill below grade.

After concrete has been properly mixed, it shall be deposited in the forms in reasonably uniform layers and in such manner as to prevent segregation of the aggregates. It shall be thoroughly spaded or puddled while being placed to insure maximum density and prevent honey-combing.

No concrete shall be deposited when the air temperature is less than 40 degrees F. No material shall be deposited on a frozen sub-grade, nor shall any frozen moisture or material be incorporated into the mixture.

No concrete shall be placed in water, nor shall water be permitted to rise on it or to run over it within a period of 24 hours after it has been placed.

Unsatisfactory concrete, resulting from failure to observe the above requirements or otherwise, shall be removed and replaced as directed by the Engineer.

4. COMPENSATION:

Payment for all concrete, except as may be elsewhere herein provided, shall be included in the prices bid for the construction units with which it is placed and no separate or extra compensation will be allowed directly therefore.

6.0 TESTING

DUCTILE IRON PIPE:

A. Field Inspection: The Engineer shall perform visual inspection of the material prior to placement by the Contractor. The Engineer may make non-destructive tests to determine the soundness of the pipe. The Contractor shall assist the Engineer in handling and moving the pipe as required.

B. Material Test: Material test shall be conducted during the manufacturing

process and the results shall be included as part of the submittals. No other material test shall be required.

STEEL CASING PIPE: Material test shall be included as part of the submittal. No other material test shall be required.

COMPACTION TESTS: Compaction tests shall be performed in accordance with AASHTO T 191 or ASTM D 2922. Maximum compaction shall be determined in accordance with AASHTO T 99. Compaction tests for water pipe related work shall not be less than as follows:

(Number of Compaction Tests)		
	AASHTO T-99	AASHTO T-191 or ASTM D 2922
Stabilization Material	1	One per 100 CY
Bedding Material	2	One per 600 LF
Tamped Backfill	2	One per 600 LF

HYDROSTATIC TESTING:

The completed System shall be tested as herein stated. The pipe shall be filled with water and all air exhausted. Each section shall be tested under a hydrostatic pressure of 150 pounds per square inch and shall not show leakage exceeding 10 gallons per inch of diameter per mile of pipe per 24 hours when so tested. Whatever shall be measured into a container and refilled to the pre-test level. The pressure shall be maintained for 4 hours by pumping as necessary, and if the pipe has been backfilled, a 24-hour test is required.

All visible leaks at exposed joints and all leaks evident on the surface where joints are covered shall be repaired, and leakage eliminated, regardless of total leakage shown by the tests. Lines which fail to meet tests shall be removed, if necessary, or repaired and retested until compliance with these test requirements is affected.

These tests are to be made at the Contractor's expense, and he is to provide all necessary fittings, equipment, appliances, and any other necessary items to conduct the tests in a manner satisfactory to the Engineer. All costs incidental to conducting these tests are to be included in the prices bid for the various items of construction as no separate or extra compensation is to be allowed therefore.

CLEANING AND DISINFECTION:

Before each section of work is placed in service, it shall be thoroughly flushed to remove any dirt or other foreign material from inside the lines; and the inside of the lines shall be disinfected by pumping into and through them a solution of chlorine of 50mg/l for 24 hours in such manner as to meet the requirements of the State Board of Health.

At least two (2) samples of chlorine free water, taken from each section shall be submitted to the State Board of Health for examination to determine if the system is free from organisms of the Coli-Aerogenes group. If such samples are not negative from organisms of the Coli-Aerogenes group, the system shall be disinfected and re-disinfected in a manner meeting the requirements of the State Board of Health, until the system is freed of contamination.

All water mains will be flushed, chlorinated and re-chlorinated until two (2) consecutive negative water samples are obtained by the Local Health Department or a representative of the water systems certified as an operator by the Mississippi Department of Health.

The CONTRACTOR shall be responsible for the conduct of all of the above defined activities, and any and all costs incident thereto shall be included in the prices bid for the various items of construction as no separate or extra compensation is to be allowed therefore.

EXISTING DRINKING WATER FACILITIES

The Contractor is required to keep existing drinking water facilities in operation during construction. Should the Contractor require that existing facilities be taken out of operation, a plan to provide for alternative service shall be reviewed and approved in advance by the Health Department and shall be adhered to during construction.

SPECIFICATIONS FOR NEW WELL CONTROLS

SECTION 16050

PART 1 - BASIC ELECTRICAL MATERIALS AND METHODS

- 1.01 ELECTRICAL SPECIFICATIONS: The electric supply is existing. The Contractor shall contact the power company prior to bidding and include in his bid the cost of labor and material necessary to supply the plant with electricity, including any cost which may be assessed by the power company for installation of power company furnished material. The Contractor shall coordinate all aspects of the construction concerning the electric service with the power company. The Approval Drawings shall include all details of the power company electric service and all associated equipment (to include all pole types and locations, switches, fuses, wire sizes and types, etc.) anywhere on the plant property.
- 1.02 TEMPORARY ELECTRIC SERVICE: The Temporary Electric Service for construction power shall be furnished, installed, and removed by the electrical contractor. Also, Contractor, shall make all necessary arrangements with the power company for metering and billing and provide for these charges and cost in his bid.
- 1.03 TESTING AND INSPECTIONS: Contractor shall assist in making periodic inspections or tests as required by the Engineer. When required, Contractor shall provide the assistance of foreman and qualified craftsmen for reasonable duration of each test, etc. Cooperate with other Contractors in preventing premature operation of equipment like water process equipment, etc., which should be first run in presence of personnel responsible for each item.
- After wiring is completed, the Contractor shall test for shorts and open circuits, intentional and unintentional grounds. All shorts, open circuits, and unintentional grounds shall be corrected.
- 1.04 GUARANTEE: Workmanship and materials shall be guaranteed for period of one year from date of official acceptance of contract. Be responsible for any adjustments, replacements and corrections necessary to restore project to first-class condition if deficiency is due to faulty workmanship or materials.
- 1.05 CONDUIT SYSTEMS: Use galvanized or sheradized steel conduit in damp locations, exterior walls, exposed out of doors or when subject to

mechanical damage after installation. Underground runs, use PVC, schedule 80 incased in concrete per NEMA standards and buried at required depth per NEMA standards. Provide electrical line red warning tape buried six (6) inches above conduit run. Protect conduits against entry of debris; keep ends capped during construction; clear or replace obstructed conduits.

Size and install conduits so that conductors may be installed without damage or excessive strain, using NEC as a minimum standard. For rigid conduit use double lock nut and bushings. For conduits larger than 1", use grounding type insulation bushing. Entire conduit system shall provide a dependable path to ground. EMT fittings shall be watertight type, T&B 5100 series. Crimped or set screw types are not acceptable.

Ream ends after threading, make bends with an approved bending tool. Replace deformed bends or off-sets. Avoid hot water pipes, stay at least 3" from covering of hot pipes except as crossing, then at least 1".

- 1.06 PULL BOXES AND JUNCTION BOXES: Pull boxes shall be code gauge and size galvanized steel and shall be installed where accessible and in location shown on the drawings or where required to facilitate the easy pulling of wires. Boxes shall be sized properly for the conduits and wires entering them. In outdoor and process areas use weatherproof and corrosion resistant boxes.
- 1.07 OUTLET BOXES: On exposed conduit in process areas, use Crouse-Hinds No. FS or FD or other galvanized steel types. All boxes galvanized, or cadmium plated, or better.
- 1.08 CONDUCTORS AND GENERAL WIRING METHODS: Type THW 600-volt copper wire for general use and types THHN 600-volt copper for High Ambient Temperature; where Contractor sizes conduit based on conductor required, basis is type THW. Approved manufacturers, Triangle, General Cable, Collyer, National Electric Products, or approved equal. Size, type and trade name stamped permanently at regular intervals on all conductors. All wire shall be color coded.

Install wire in conduit after all work which may cause damage is completed. Powdered talc or other approved compound may be used as lubricant where necessary.

Make joints and splices in conductors with approved insulating type compression fittings, T&B, Sta-kon, or Buchanan splice caps. Wire-nuts are not acceptable.

1.09 GROUNDING AND BONDING REQUIREMENTS

In order to provide a safe and reliable system, all structures, piping, equipment and electrical services involved must be properly grounded and bonded to a properly sized and installed grounding electrode system.

All work will comply with every facet of the National Electric Code Article 250, current edition. Particular attention must be given to sections 250.56 and 250.58.

The article 250 requirement for a ground resistance of 25 ohms or less shall be considered as the minimum and a resistance of 4 ohms or less shall be the goal. This resistance will be measured with equipment using a three point resistance measurement and "fall of potential" system.

Ground and elevated water tanks are a major source of danger and damage due to lightning and transient voltages. Because of this, these structures will have as a minimum, a ground ring completely around the structure consisting of #2/0 bare copper wire and 10 foot long by 3/4" diameter copper clad ground rods. The rods shall be spaced no more than 12 feet apart. There will be at least 4 radials to the tank legs or structure. All connections will be exothermic (Cadweld) performed by qualified personnel. All devices located at these tanks will be bonded to the ring.

Other structures will have a grounding system appropriate for the location per the National Electric Code article 250.

Conduit work, motors, panel boards and electrical equipment are to be effectively and permanently grounded. Feeder conduits shall provide a good path to system ground.

The grounding screw on all grounding type receptacles shall be securely grounded to the outlet box with lug and screw, or use self-grounding types.

Verify electrical continuity of all conduit runs and correct any discrepancies.

The Contractor shall be responsible for determining the extent of grounding and bonding requirements for equipment located at the site(s) covered under the contract(s) as listed herein. The Contractor shall provide for these charges, and cost in his bid.

1.10 EXCAVATION AND BACKFILLING: Excavate trenches for underground conduit or cable to required depth and width. After conduit of cable has

been installed, inspected, and approved, backfill trench with earth free of trash, rock, brick and debris, and compact as required. Under slab, follow compaction rules for general work on this project. Underground workmanship applies under slab; depth can be reduced, but provide full and complete encasement. Bond conduit to any membrane passed through.

- 1.11 CLEANING: As required, clean all equipment or exposed material provided or installed under this section. Protect from any normal use of paint, mortar, etc.
- 1.12 WORKMANSHIP: All work shall be done in a thorough, substantial, and workmanlike manner by competent workmen. Applicable rules of National Electric Code apply as minimum standard for this contract but do not replace or reduce any specific requirement herein.
- 1.13 INTERFERENCES: The drawings are generally diagrammatic. Cooperate with other trades so that interferences of conduit, equipment, piping, etc., will be avoided. If interference develops, refer promptly to Engineer for decision.
- 1.14 EXISTING MOTOR CONTROL CENTER: The new motor control center section shall be attached to the existing plant motor control center via extension of the horizontal bus and ground bus. The contractor shall take all necessary precautions to prevent any cosmetic, structural, electrical, or functional damage to the existing structure.

END OF SECTION

SECTION 16900

MOTOR CONTROL CENTER SPECIFICATIONS

PART 1 – GENERAL

- 1.01 MOTOR CONTROL CENTER SPECIFICATIONS
 - A. Multi Unit Motor Control Center where and as shown on the drawings and as herein specified.
 - B. Acceptable Manufacturers shall be Control Systems, Inc., Jackson, MS; Allen Bradley, Cutler Hammer or Square D Company and shall be compatible with the existing MCC structure.

- C. Control Center shall be of the NEMA enclosure type and NEMA wiring type as listed below:

1. Enclosure Type

NEMA 12 Polyurethane gasketed freestanding enclosure.

2. NEMA Wiring Type

Class II, Type B – All necessary wiring between modules shall be furnished. All wires, both power and control, shall be wired to pull-apart terminal blocks within the module for easy module removal. The terminal block shall be angled to aid installation of external wiring. All power and control wires shall be marked at both ends using self-adhering wire markers. No two wires having different functions within the motor control center shall have the same markings. Furnish a drawing for each module showing its individual power and control wire numbers and terminals. Also, furnish a motor control center physical power and control terminals layout showing each individual module terminal numbers.

- D. Control center shall consist of formed galvanized steel vertical sections bolted together to form a rigid freestanding assembly. Each control unit shall be simulated with galvanized steel barriers and shall have black Bakelite nameplate engraved with white letters indicating name of load served, circuit number, and equipment identification number. Each section shall be ninety (90) inches high, twenty (20) or thirty (30) inches wide, and a minimum of twenty (20) inches deep. Each section shall have a four (4) inch vertical wiring gutter. Two sections sharing the same vertical wiring gutter will not be acceptable. There shall be a maximum of six (6) modules in the front and five in the rear of any one vertical section. Only one (1) combination starter shall be installed in each module. In addition, top and rear plates must be screw removable. Riveted plates will not be allowed.
- E. All bus bars shall be electrical grade copper completely tin-plated and braced to withstand 42,000 Amperes RMS symmetrical. Vertical bus bars shall be rated 300 Amperes minimum. Provide a grounded steel plate barrier to isolate the vertical bus. Vertical bus risers must end twelve (12) inches above floor level to allow ample conduit space and bending room for cables. Provide snap-in PVC inserts to cover stab openings not being utilized. Provide removable metal barriers over horizontal power bus. High quality non-tracking insulators shall support bus bars. Provide horizontal copper ground bus the entire length of the motor control center.
- F. Each starter unit shall be combination type, with molded case magnetic only motor circuit protector circuit breakers quickmake/quickbreak, and

starters of sizes and types indicated on the drawings. Overload relay thermal units shall be properly sized to actual motor nameplates amperes, and each starter shall have three (3) overload elements and be ambient compensated with alarm contact.

- G. All starter coils shall be 120 volts supplied from individual control transformers in the motor control center starters. Starters shall have extra normal open or normal closed interlocks as required for controls.
- H. The Motor Control Center manufacturer shall furnish eight copies of approval drawings in a Bound Booklet Form 8.5" x 11". No sheet shall be larger than 8.5" x 11". Folded larger sheets will not be acceptable. The drawings shall contain a table of contents consisting of the following information.

1. Motor Control Center information sheet with following information.

- a. Starter nameplate identification and unit location within motor control center.
- b. Type of magnetic starter and NEMA size rating.
- c. Horsepower, service factor, RPM, and full load amperes of motor.
- d. Frame size, interrupting capacity, rating, and trip amperes of all circuit breakers.

2. Motor Control Center layout and specifications sheet with following information.

- a. Complete physical layout of motor control center.
- b. General specifications covering enclosure NEMA type, supply voltage, incoming cable size, main breaker information, bussing size, material, bracing and plating, ground bus information, neutral bus information if required, NEMA class and type wiring, type of combination starter, and terminal block information if required.

3. Individual unit's power and control diagrams with following information.

- a. Complete power and control diagrams on each individual unit. All power and control wires shall be marked at both ends using self-adhering wire markers. No two wires having different functions within the motor control center shall have the same wire markings. Standard unit drawings having same wire numbers will not be accepted.

4. Overall one line power diagram of the complete motor control center including following information.
 - a. Entrance cable size
 - b. Main breaker location and size
 - c. Metering section one line diagram, if required
 - d. Main bus size and type
 - e. Each individual unit's information including circuit breaker trip size, starter size and type, distribution transformer complete information, and distribution panel complete information.
 - f. Remote feeder items information horsepower, name identification, and proper cable sizes to feed remote devices.
5. Power terminal layout sheet with following information.
 - a. Complete overall motor control center physical layout showing each individual unit and that unit's individual power terminals and wire numbers.
 - b. Complete power wiring inter-unit connection information.
6. Control terminal layout sheet with following information.
 - a. Complete overall motor control center physical layout showing each individual unit and that unit's individual control terminals and wire numbers.
 - b. Complete control wiring inter-unit connection information.
7. Complete motor control center instruction and installation manual.
8. All approval drawings shall be prepared per Joint Industrial Conference (J.I.C.) standards for engineers review **prior to any fabrication** of control equipment. The motor control center shall have an Underwriters Laboratories, Inc. (UL) label, and proof of label availability shall be submitted with above drawings.
9. The motor control center manufacturer shall provide a written warranty with approval drawings covering all motor control center materials and parts furnished for a period ending one year after final acceptance of the project. This warranty shall cover all material replacement, all labor, and all travel expenses.

END OF SECTION

SECTION 16940

PROCESS INSTRUMENTATION AND CONTROL

PART 1 – GENERAL

1.01 WORK INCLUDED

The work covered under this section of the specifications includes the furnishing and installing of all instrumentation and control hereinafter specified to perform the intended function. The proposed additional well shall be incorporated into the Owner's existing SCADA (Supervisory Control and Data Acquisition)/Telemetry system. All data signals, alarms, and functions shall be transmitted to the City of Hattiesburg's existing SCADA system via VHF radio communication, utilizing the Owner's existing radio frequency. All data shall be incorporated into the Existing Office Central Telemetry Unit (CTU) to provide the operator with graphical interface, monitoring and control as well as provide records of appropriate system transactions. The Contractor shall coordinate all SCADA programming with the Owner, The City of Hattiesburg, and the Project Engineer. All equipment provided shall be compatible with existing SCADA equipment. All programming modifications to the Owner's existing SCADA system shall be provided.

1.02 RELATED WORK

Section 16050 – Basic Materials and Methods

Section 16900 – Motor Control Centers

PART 2 – PRODUCTS

2.01 SYSTEM SUPPLIER

- A. All instrumentation and control systems equipment shall be furnished by a System Supplier. The System Supplier shall provide and be responsible for the proper operation of all Process Instrumentation and Controls and Control Panels. The System Supplier shall perform in house submittal drawings and assembly of products. Subcontracting submittal drawings and equipment assembly will not be permitted.
- B. Substitutions of functions or equipment specified will not be acceptable.
- C. The entire system shall be warranted for one year from date of substantial completion.
- D. The Contractor shall assign full responsibility for the function operation of

all new instrumentation and control systems to a System Supplier. This System Supplier shall be responsible for all coordination necessary in order to select, to furnish, to supervise installation and connections, to calibrate, and to place into operation all instrumentation and controls along with all other equipment and accessories as specified herein. The System Supplier shall be a licensed electrical contractor in the state of Mississippi.

- E. The System Supplier shall be one of established favorable reputation who has designed and produced similar systems and components for a period of at least (10) ten years.
- F. It shall be required of the System Supplier to execute and submit a guarantee to assume full responsibility as defined in Section 2.01, paragraph 'A' above.
- G. The written guarantee shall be on the named System Supplier's letterhead and shall be signed by a responsible representative who will be primarily involved in the fulfillment of this guarantee. The written guarantee shall be stated as follows:

"... (Name of Single Source System Supplier)...guarantees that the proposal offered provides for complete compliance with all requirements of this section of the project specifications without exceptions to these specifications.

Full responsibility will be placed upon... (Name of Single Source System Supplier)...for all coordination necessary to select, to furnish, to supervise installation and connections, to calibrate, and to place into operation Process Instrumentation and Controls, Control Panels, and all other equipment and accessories needed to provide a complete operating system to comply with requirements of this section of the project specifications.

... (Name of Single Source System Supplier)... guarantees to provide all submittal drawings, instruction manuals, and qualified personnel for specified field services and training, all as defined within this section of the project specifications."

... (Name of Single Source System Supplier)... is a licensed electrical contractor in the state of Mississippi; Certificate of Responsibility No. _____, name of qualifying party_____;

Guarantee on system function and equipment shall be one (1) year from date of substantial completion or partial acceptance.

2.02 SUBMITTAL DRAWINGS

A. Descriptive literature and drawings for equipment and systems being furnished under this section shall be included in two submittals as a maximum. If two submittals are made, the first shall include all primary devices, transmitters, sensors, and field mounted equipment. The second submittal will include the balance of the submittal required. The submittal shall include as a minimum, equipment specifications, dimensional drawings, flow and other calculations, schematic drawings of each and every system within the complete offering, and such other information requested by the Engineer or considered necessary to the proper installation of the equipment. Furnish submittals in a Bound Booklet Form 8.5" X 11". No sheets shall be larger than 8.5" X 11". Foldout larger sheets will not be acceptable. This submittal shall include coordinated information and drawings for all items that the Single Source System Supplier is required to furnish under this section of the specifications, all in one integrated and coordinated manual. Each item of a submittal shall carry the appropriate title and be indexed against the appropriate specification item.

B. A quantity of eight (8) sets of submittals shall be furnished for the Engineer's approval.

2.03 INSTRUCTION MANUALS

Prior to 65% of the value of job completion, System Supplier shall furnish two (2) copies to the Engineer and one (1) copy to the Owner of all descriptive matter and complete system operation instruction manuals in separate indexed binders coordinated with the equipment that is furnished and installed for approval. System Supplier shall incorporate Engineer's comments and resubmit for approval within thirty (30) days of receipt of Engineer's comments. Once final approval is obtained, System Supplier shall furnish two (2) copies to the Owner and two (2) to the Engineer.

2.04 RELATED SYSTEM COMPONENTS

The attention of the System Supplier is called to sections concerned with electrical work, chemical feeders, valves, piping, etc., and such other devices not specified under this section, but related to it.

PART 3 – EXECUTION

3.01 TESTING

A. The controls and motor control centers shall have been factory tested in a

high-power Underwriters Laboratories, Inc. (U.L.) 508 listed laboratory to prove adequate mechanical and electrical capabilities. Proof of label availability shall be submitted with approval drawings. All factory tests shall be completed by a qualified factory-trained representative with a minimum of fifteen (15) years of experience. Factory testing shall consist of, but not limited to the following:

1. Verify proper voltage on motor control center horizontal and vertical busses.
 2. Circuit breakers shall be tested one at a time in sequential order.
 3. All motor contactors shall be manually tested, one at a time.
 4. Phase-to-phase voltages shall be verified at each starter.
 5. Verify proper voltage on the secondary (motor) side of each contactor.
 6. Calibrate all timers and dipswitches, if applicable.
 7. Test and verify all Variable Frequency Drives (VFD) and Solid State Starters (SSS) with a test motor and verify the proper rotation of the motor.
 8. Calibrate/Setup all preliminary VFD and SSS parameters for specific job application.
 9. Simulate and verify all motor "call for", digital and/or analog, inputs and outputs.
 10. Calibrate all Level, Pressure and Flow controllers.
 11. Simulate Inputs from remote equipment (if applicable).
 12. Verify outputs to remote equipment (if applicable).
 13. Verify proper torque on all terminals and/or lugs.
- B. Provide adequate field testing of the motor control centers and controls by a qualified factory-trained manufacturer's representative with a minimum of fifteen (15) years of experience. Field testing shall consist of, but not limited to the following:
1. Verify proper installation of motor control centers, control panels and all conduits.
 2. Verify proper grounding of motor control centers and control panels. All work will comply with every facet of the National Electric Code Article 250, current edition. Particular attention must be given to sections 250.56 and 250.58.
 3. Verify proper torque on all terminals and/or lugs.
 4. Verify proper connection of power and control wiring.
 5. Verify proper operation of automatic controls.
 6. Verify Analog/Discrete I/O signals transmitted to remote panels (if applicable).
 7. Calibrate timers/dipswitches.

8. Calibrate level and pressure control devices.

3.02 ENGINEERING SUPERVISION

- 7.01 The services of a qualified representative of the selected Single Source System Supplier shall be provided to inspect the completed installation, suggest all adjustments necessary to place the system in proper operation, and instruct operating personnel in the care and operation of the equipment furnished. A minimum of one (1) day and one (1) trip start-up service and training operating personnel shall be included. The services shall be furnished by the Contractor as a part of the work included under this section of the specifications.
- 7.02 The System Supplier shall show satisfactory evidence that he maintains, a fully equipped factory organization capable of furnishing adequate service for the equipment furnished, included replacement parts. Suppliers employing outside organizations for "ON CALL" service shall not be considered.

3.02 GENERAL INSTALLATION

- A. Installation of instrumentation and controls shall be in strict compliance with the manufacturer's instruction. The locations of these items as shown on the Contract Drawings are approximate only. Exact locations shall be as approved by the Engineer during construction. It is the duty of the Contractor to obtain, in the field, all relevant information required for proper placement of instrumentation and controls. In the case of interference with other work, proceed as instructed by the Engineer and provide all materials and labor required to prevent construction delays.
- B. Execution of the installation shall be in full accordance with codes and local rulings. The Contractor shall be responsible for any expenses that are a result of work performed contrary to said codes and regulations.
- C. The System Supplier shall coordinate with the Contractor the installation, the location of process equipment, and connections of process equipment to related equipment panels, subject to the Engineer's approval. The equipment being furnished with electrical controls or instrumentation must be submitted to the System Supplier for approval and coordination with all other control and instrumentation on this project. This engineer will not approve any equipment submittal until this coordination has been accomplished.

- D. The new MCC section shall be connected to the existing Plant MCC via bus splice kits for both the horizontal bus and ground bus. No wire connections shall be allowed. The MCC is specified to be braced for 42,000 Amperes RMS symmetrical. The contractor shall confirm the rating of the existing MCC and the new section shall be provided with the equivalent rating.

3.03 SPARE PARTS

- A. Provide the following spare parts packaged for long-term storage and delivered to the owner.

<u>QTY.</u>	<u>MODEL NO.</u>	<u>DESCRIPTION</u>
1	SWC	Simplex Well Controller
1	MM	Motor Monitor
1	LF	Analog Line Filter

- B. The System Supplier shall maintain an inventory at his facility of at least one (1) part of each type furnished on this project. These parts shall be available for delivery to the owner in a maximum of twenty-four (24) hours.

3.04 WELL MOTOR CONTROL CENTER MISCELLANEOUS CONTROLS

- A. The Motor Control Center (MCC) shall be designed for 277/480 volt, 3 phase, 4 wire power. The contractor shall confirm the operating voltage.
- B. WELL: Provide a combination circuit breaker and Solid State Starter (SSS), per Component Specifications, for the Well. The Solid State Starter shall come complete with a shorting contactor and overload protection. The reduced voltage soft start starter shall be Allen Bradley model SMC, Siemens model SIKOSTART, or approved equal. In addition, provide the following additional equipment and controls for the Well.
1. Provide a Duplex Well Controller (DWC-1), per Component Specifications. In the automatic mode, the Duplex Well Controller shall receive start and stop commands from the existing Clearwell Level Meter/Controller. Make all control modifications necessary to accommodate the new well into the existing control system.
 2. Additionally provide controls to operate one well at one time in both the automatic and manual modes of operation.
 3. Provide a well maximum run timer that will automatically alternate the

wells based upon maximum time.

4. The existing well Simplex Controller shall be removed from the existing MCC control section and replaced with an anodized aluminum deadfront blank. The existing well Backspin Timer shall be reused.
 5. Provide a field adjustable well Backspin Timer (BST) for the well, per Component Specifications. The timer shall prevent the restarting of the well without a field adjustable time delay.
 6. Provide a Motor Monitor (MM-1) complete with Current Transformer, both per Component Specifications. The motor monitor shall provide a positive run signal, monitor proper motor running conditions, indicate motor running time, and motor full load running amperes. In addition, motor monitor shall come complete with high or low amperes set point for the well. The well motor current shall be transferred to the existing CTU and displayed on the system computer.
- C. REMOTE TELEMETRY UNIT: Provide the following signals to the existing Remote Telemetry Unit (RTU).

Analog Inputs:

1. Well Motor Current
2. Well Flow

Digital Inputs:

1. Well Running
2. Well Failure
3. Well Selector Switch in Auto

Digital Output:

1. Well Force On
2. Well Force Off

- D. CHEMICAL FEED SYSTEMS: Modify the chemical feed systems to accommodate the new local well. Confirm proper operation of chemical feed systems in both the manual and automatic modes of operation.

PART 4 - FIELD INSTRUMENTATION AND EQUIPMENT MODIFICATIONS

- 4.01 WELL DISCHARGE FLOWMETER: Provide properly sized Well Discharge Flowmeter (FM), per Component Specifications. Flowmeter to be furnished and installed by System Supplier.

- 4.02 SCADA SYSTEM AND CENTRAL COMPUTER MODIFICATIONS: Necessary modifications shall be made to the existing City of Hattiesburg SCADA system and central computer equipment to incorporate the new well at the treatment plant site. All data shall be incorporated into the existing CTU to provide the operator with graphical interface and monitoring as well as provide records of appropriate system transactions. The control system supplier shall be responsible for coordinating all work with the City of Hattiesburg, project Engineer and existing SCADA system supplier.

PART 6 – COMPONENT SPECIFICATIONS

- 6.01 Three-Phase Motor Current Monitor: Provide a 3-phase motor current monitor (converter) to input motor current into an RTU with '1-Wire' communications protocol. The converter shall be capable of measuring the current on each phase using inputs from three (3) separate 5-amp Current Transformers. The converter shall include true RMS (Root Means Square) conversion on each input for the most accuracy. The converter shall be capable of either SnapTrack or backplate mounting and be powered by and external +12V DC power supply. The converter shall include a "Power On" LED. Provide quick-disconnect connectors with capture-type terminals. Spring-clip type terminals shall not be accepted.

TAG

3CT-GEN

SERVICE

Emergency Generator Current Monitor

- 6.02 SOLID STATE STARTER: Provide a solid-state starter, including the following features for each pump.

A. GENERAL

This specification describes the requirements for a solid-state motor controller to provide voltage ramp soft starting of a standard AC induction motor. These controllers shall provide a superior alternative to other types of reduced voltage starting such as autotransformer, wye-delta, primary resistor, and part winding. Provide smooth stepless acceleration, reduced inrush current, smaller physical size, and higher duty cycle capability.

B. QUALIFICATIONS

1. Manufacturer

- a. The manufacturer shall have a minimum of 15 years experience in the manufacturer of solid state reduced voltage controllers.
- b. The approved manufacturers are:

2. Support

- a. The manufacturer shall maintain factory trained and authorized service facilities within 100 miles of the project and shall have a demonstrated record of service for at least the previous ten years.
- b. Support personnel are to be direct employees of the manufacturer.

3. Certification

- a. To insure all quality and corrective action procedures are documented and implemented all manufacturing locations shall be certified to the ISO-9001 Series of Quality Standards.
- b. Third party manufacturers and brand labeling shall not be allowed.

C. REFERENCES

1. The controller shall be designed to meet the applicable requirements of:

- a. EN
- b. IEC
- c. cULus
- d. NEMA
- e. IEEE
- f. VDE

2. These standards shall include:

- a. Creep distances and clearances 600V (UL/CSA) and 500V (IEC)
- b. Power terminal markings per EN 50005 and EN 60947
- c. Dielectric withstand per UL508 and IEC947
- d. Noise and radio frequency (RF) immunity per NEMA ICSA1-109
- e. Surge withstand per IEEE587 and IEC 801-5

D. WARRANTY

The manufacturer shall provide their standard parts warranty for twelve (12) months from the date of purchase.

E. RATINGS

- 1. The solid state reduced voltage controller shall accept an input

voltage of 480 VAC, three phase plus or minus 10 percent

2. Environmental Ratings

- a. Storage ambient temperature range: -20 to 75 degrees C.
- b. Operating ambient temperature range: 0 to 50 degrees C.
- c. The relative humidity range: 5% to 95% non-condensing.
- d. Operating elevation: up to 2000 Meters.

3. Definitions

- a. The Solid State Reduced Voltage Controller Unit shall refer to the actual controller unit that will be mounted within the specified enclosure.
- b. The Solid State Reduced Voltage Controller System shall refer to the controller unit and all items specified under Controller System Options.

F. SOLID STATE REDUCED VOLTAGE CONTROLLER UNIT DESIGN

- 1. The open-type controller device shall be modular, consisting of a power structure and a logic component.

2. Power Structure

- a. The power structure shall include an SCR bypass.
- b. The power structure shall include a built-in overload.
- c. There shall be a CT on each phase of the device for current measurements.
- d. For ratings 1 Amps to 480 Amps. SCRs shall have the following minimum repetitive peak inverse voltage ratings.
 - i. 1400V for units rated 200 to 480V
 - ii. 1600V for units rated 200 to 600V

3. Logic Component

- a. The logic component shall be an integral part of the power structure so it can not be removed an misplaced
- b. The control module shall provide digital microprocessor control and supervision of all controller operation, including pulse firing of the SCRs.
- c. The control module shall consist of the following.
 - i. Self-tuning power supply accepting control power input from 100 to 240 VAC or 24V AC/DC, 50/60 Hz.
 - ii. Logic control circuitry incorporating a latch circuit for three-wire control.
 - iii. Input / output circuitry
 - iv. Dipswitches are to be used for secure setting of the

- v. setup parameters.
A POT setting is to be used for setting up the motor FLA.
- d. The control terminals shall be easily accessible and located on the front top of the device. The terminals shall be UL rated for 300 Volts and accept a maximum of two wires rated number 24 to number 14 AWG.

G. CONTROLLER UNIT FEATURES

- 1. Starting Modes: The controller shall provide the following starting modes as standard.
 - a. Soft Start with Selectable Kickstart
 - i. Programmable initial torque value of 15 to 65 percent of locked rotor torque
 - ii. Programmable acceleration ramp time from 0 to 30 seconds
 - iii. A selectable kickstart, or boost, shall be provided at the beginning of the voltage ramp. The kickstart shall provide a current pulse of 450 percent of the full load current. The kickstart time shall be adjustable from 0 to 1.5 seconds.
 - b. Current Limit Start
 - i. Provides means of limiting the maximum starting current
 - ii. Programmable for 150 to 450 percent of full load current
 - c. Soft Stop
 - i. The Soft Stop option shall provide a voltage ramp-down for an extended motor stopping time.
 - ii. Soft Stop shall be initiated by a Stop input. A coast-to-rest stop shall still be possible with a separate stop input.
 - iii. Programmable voltage ramp down time from 100 to 300 percent of the start time selected.
 - iv. The load shall stop when the motor voltage drops to a point where the load torque is greater than the motor torque.
- 2. Overload Protection
 - a. Shall meet applicable standards as a motor thermal protective device.

- b. Shall utilize three-phase current sensing. The use of two current transformers shall be unacceptable.
 - c. Selectable trip classes of 10, 15, and 20 shall be provided as standard.
 - d. Electronic thermal memory shall provide enhanced motor protection.
3. Digital I/O
- a. A minimum of two configurable auxiliary contacts and one fault auxiliary contact shall be provided for customer use.
 - b. The contacts shall be rated for 240 Volts AC maximum.
Contact configuration shall contain:

Aux1	NO	Normal/Up-to-Speed
Aux2	NO/NC	Normal/Up-to-Speed
Fault Aux	NO	Fault
4. Protection and Diagnostics
- a. The following protection shall be provided as standard with the controller.
 - i. Pre-start line fault advising of shorted SCR, missing load connection or phase reversal
 - ii. Running line fault advising power loss, shorted SCR or phase imbalance.
 - iii. Overtemperature
 - b. The Overload is the only defeatable protection provided as standard with the controller.
 - c. When fault conditions are detected, the controller shall inhibit starting or shut down SCR pulse firing.
 - d. An auxiliary contact that is programmable for fault indication shall be provided for customer use.

TAG
200 HP SSS

SERVICE
Well Solid State Starter

DUPLEX WELL CONTROLLER: Provide a duplex controller to control two wells that includes the following control functions:

- A. OPERATORS AND INDICATORS (for each well)
- 1. Manual-Off-Automatic selector switch
 - 2. Green "Well Running" pilot light
 - 3. Red "Well Failure" pilot light

- B. A Well NO.1 LEAD – ALTERNATE – Well NO.2 LEAD sequence selector switch to select either well as Lead well or to select that the motors alternate as Lead well on each call for cycle.
- C. Signal inputs for: Stop, Lead Well Start, Lag Well Start, and a Low Level Alarm. The sensors shall be optically isolated and operate on 12VDC with a maximum current of 12 mA for intrinsic safety.
- D. Pilot light indicators for each level control input, which includes Start and Stop levels and Running inputs for each well along with a low level alarm.
- E. A field adjustable failure time delay for each well in the range of five (5) seconds to six and a half (6.2) minutes to start the Lag well at the Lead well start point if the Lead well fails or if the Lead well selector switch is placed in the off position. If a well fails, the remaining functional well shall remain the Lead well on future cycles. The failed well shall only be called to operate at the Lag well operating point. Normal well alternation shall resume when failure condition is corrected and well has been reset.
- F. Soft stop feature to require the motors to stop three (3) seconds apart during the condition that both motors are running when signaled to stop. Soft start feature to require the motors to start three (3) seconds apart during conditions that the Lead and Lag motors are called for simultaneously.
- G. Individual field adjustable time controls to delay starting each well in the automatic mode after power failure or during initial startup.
- H. Well failure, well seal failure, and low-level alarm red pilot lights shall flash when activated.
- I. Provide well running, well failure, and seal failure alarm contacts for each well. In addition, provide a low-level alarm contact.
- J. Manual override inputs for each well, which can be used to manually override the duplex control's well outputs when the controls are in the Auto mode. Inputs shall be provided to start or stop each well from a remote location.
- K. Improper sequence alarm (if required) to activate the common alarm in the event the control level inputs are activated in the wrong order. The order shall be Stop, Lead Start and Lag Start. The low-level alarm shall not be included in the improper sequence test.

- L. Provide automatic well alternation on seal failure when a seal failure condition is detected and the motors are in the automatic mode. The failed well shall be made the Lag well on future cycles until the failure condition is corrected.
- M. An exterior alarm light output which would flash the light brightly during any failure condition. The output shall allow the light to dim glow under normal conditions to indicate that power is on and the lamp is good. A normally open common alarm output contact shall be energized by these alarm conditions.
- N. A lamp test feature (if required) to light all of the front panel pilot lights.

<u>TAG</u>	<u>SERVICE</u>
DWC-1	Well Duplex Controller
6.03	

6.04 DELAY TIMER: Delay timers shall be the adjustable quelling constant type and shall be adjustable in one-second increments from 1 to 1023 seconds. They shall have a repeat accuracy of $\pm 0.1\%$ with no first shot effect. Setting accuracy shall be $\pm 2\%$ with reset time of 50 milliseconds maximum. Recycle time shall be no more than 150 milliseconds during timing and 16 milliseconds after timing. Each timer shall be provided with two LED indicators, indicating timing and on. Timer output contacts shall be double pole double throw, rated at 10 Amperes resistive at 120 VAC.

<u>TAG</u>	<u>SERVICE</u>
BST	Well Backspin Timer

6.05 MOTOR MONITOR: Provide an electronic solid state Motor Monitor with portional 4-20mA output, powered by 120 volt AC that will accept a zero (0) to five (5) amp input signal condition the signal to perform ON/OFF or OPEN/CLOSE discrete dry type setpoint contact conditions based on the input signal value. The Motor Monitor shall have the following features.

- A. Provide an LCD readout meter providing field adjustable scales of 0-25.0, 0-50.0, 0-100.0, 0-250, 0-500 and 0-1000 to accurately indicate the motor full load current using the 0-5 amp input signal.
- B. The Monitor shall be capable of displaying motor total running time up to 99,999.9 hours and be provided with reset capability from the rear of the monitor. The display shall include a non-volatile EEPROM memory backup

that does not require battery backup during power failure.

- C. Provide two (2) separate field adjustable setpoints, each with discrete, isolated sealed SPDT relay output contacts. The setting of each setpoint shall be adjustable throughout the complete signal range from the front of the Monitor. Each set point shall be provided with a field adjustable "ON" and "OFF" time delay, adjustable from zero (0) to fifteen (15) seconds. The actual setting of each setpoint shall be able to be displayed on the LCD readout at any time. An LED indicator shall be provided for each setpoint and shall operate as follows:
1. Setpoint No. 1: When setpoint is timing, the indicator shall burn amber. After timing period and current is at or above setpoint, indicator shall burn green.
 2. Setpoint No. 2: When set point is timing, the indicator shall burn amber. After set timing period and current is at or above setpoint, indicator shall burn red.
- D. Provide a 4-20mA or a 1-5Vdc output signal which is proportional to the amperes being measured. Load maximum impedance should not exceed 330 ohms. Output signal shall be factory calibrated.

<u>TAG</u>	<u>SERVICE</u>	<u>SCALE</u>
MM-1	Well Motor Monitor	0-500 amps

- 6.06 CURRENT TRANSFORMER: Current transformers insulation class shall be 0.6 KV BIL, 10 KV Full Wave. They shall be manufactured to meet the requirements of UL1244 and have a minimum accuracy of 60Hz of 2%. Current transformers shall be provided with brass stud terminals and mounting bracket.
- 6.07 CONTROL RELAYS: Provide a SnapTrack channel mounted relay board with LED status indicator and individual quick-connect terminals. The SnapTrack can be optionally snapped to a DIN rail. The indicator LED shall turn on when the relay is energized. The terminals shall be of the fixed screw cage clamp type, rated for at least 10 amps at 250 Volts. Tubular screw clamp types will not be accepted. The relay shall be rated for 10 amps. Surge suppression shall be provided on the coil side of the relay. The board shall include built-in transient protection across the coil. DC powered versions shall include a built-in diode across the coil to protect external devices from coil surges. The relay and connectors shall be UL approved.

- 6.08 PROPELLER FLOWMETER: Meter shall be a velocity propeller type, magnetic drive, sealed housing, flanged tube meter for 150-psi working pressure. It shall comply with the applicable provisions of AWWA C704-70. The meter shall come complete within a sealed indicator having a range as required, shall be equipped with a six digit totalizer, and shall be accurate within +2% of true flow. The meter assembly shall be constructed as follows:
- A. Meter Tube shall be fabricated steel pipe and use 150 lb. AWWA Class "D" flat face steel flanges. The internal and external of the meter tube and meter head shall be blasted to near white metal and coated with 12-15 mils of fusion epoxy coating, applied by the fluidized bed method. Meter tubes shall have a constant nominal inside diameter to offer minimum obstruction to the flow and shall be furnished with four straightening vanes.
 - B. Meter Head shall be connected to the tube by means of a flanged, o-ring sealed connection with stainless steel bolts designed for easy removal for inspection or repair.
 - C. Gearbox shall be bronze, sealed, and filled with a high-grade lubricant. The drive mechanism shall be magnetically driven from the propeller, through a ceramic sleeve magnetic coupling and be isolated from the water flow by means of an o-ring sealed housing. A rigid stainless steel vertical shaft is required from the miter gear frame to the indicator-totalizer; flexible cables will not be accepted.
 - D. Propeller shall utilize a water lubricated ceramic sleeve bearing that rides on a ceramic-coated stainless steel spindle. The spindle on which the propeller is mounted shall be parallel to the direction of the water flow in the pipe. Dual ceramic thrust bearings shall be standard on all meters to handle flows in both the forward and reverse directions. Ball bearings or other types of sleeve bearings will not be accepted. The propeller shall be a conical shaped, three bladed propellers, injection molded of thermoplastic material, resistant to normal water corrosion and deformity due to high flow velocities. Propellers, which have been trimmed, shaved or require varying change gears for the same size meters, will not be accepted.
 - E. Transmitter shall utilize a long life magnetically actuated reed switch. The pulse rate output is one contact per totalizer hand revolution, for use with a

remote totalizer. A two-lead shielded cable, four feet long, shall be furnished with each transmitter. The enclosure shall be made from injection molded glass filled engineered grade of thermoplastic. It shall attach directly to the propeller meter head with screws having holes for seal wires and be protected with an o-ring seal.

1. ACCURACY: Plus or minus 2.0% within the range specified for each meter size.
 2. TEMPERATURE: 140° F Maximum.
 3. FLOW RANGE: Acceptable for each indicator-totalizer-transmitter unit is the same as that for the meter to which the unit mounts.
 4. OUTPUT SIGNAL: Pulse rate: one contact per revolution of totalizer sweep hand. Maximum pulse transmission distance: 1,000 ft.
 5. SWITCH RATING: Contact rating 10 watts; Switching voltage 200 VDC-Max.; Switching current 0.5 Amp.-Max.; Carry current 1.2 Amp. Max.; Initial contact resistance 100 Ohms-Max.; Capacitance 0.2 Picofarads-typ. NOTE: Switch contact normally open.
 6. MATERIALS: Used in construction are chosen for their durability and immunity to the corrosive effects of atmospheric moisture and the liquids measured by the meter assembly.
- F. Totalizer shall be a six digit, straight reading type with a 3" diameter, 100-division dial and center sweep test hand to permit timing for an accurate determination of flow rate. The totalizer shall read in units of gallons and shall be magnetically driven and equipped with change gears to facilitate easy change of registration without removing pressure from the line. The totalizer shall be encased by an o-ring sealed bonnet made from injection molded 20% glass filled engineered grade of thermoplastic. The bonnet shall be attached to the transmitter by screws with seal wire holes and have a hinged lid with a padlock hasp. The bonnet mounting screws shall have holes for seal wires. Instantaneous indicator-totalizer or LCD type totalizer is not desired and will not be accepted.

<u>TAG</u>	<u>SERVICE</u>	<u>SIZE</u>	<u>RANGE</u>	<u>PULSE RATE</u>
FM	Well Discharge Flow	12"	0- xxx gpm	1 Pulse = 1k Gal.

SECTION 02210

EXCAVATION, TRENCHING AND BACKFILLING

PART I - GENERAL

1.01 SCOPE

A. The Work under this Section consists of furnishing materials, labor, equipment, and services necessary for the excavation trenching, and backfilling required for exterior light fixture standard foundations and underground electric supply lines to the building and lighting standards on this Project.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 02630 - Landscaping

B. Section 16000 - Electrical Provisions

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 LOCATION OF LIGHTING STANDARDS

Prior to excavation for exterior fixture standards, CONTRACTOR shall stake all standards locations and the ENGINEER shall approve these locations prior to construction. Stake all locations and give ENGINEER 48 hours notice for inspection. The ENGINEER shall have the authority to move any standard location up to ten (10) feet prior to excavation at no additional cost to the OWNER. Standard locations may have to be moved to avoid existing storm drain lines in the areas.

B. Underground electrical services shall be coordinate with the local retail supplier of electricity, communications, TV Cable and other utilities involved.

3.03 EXCAVATION

A. CONTRACTOR is to coordinate and cooperate with the OWNER in locating all subsurface equipment and facilities. CONTRACTOR shall be responsible for locating and exposing all existing underground structures, utilities and underground obstructions that may interfere with locating lighting standards, poles, conduits and services. All subsurface equipment and facilities shall be located and exposed prior to performing any digging and/or trenching. CONTRACTOR at his sole cost and expense will be responsible for repairing and/or replacing any damaged equipment and/or facilities caused by

excavating.

- B. All excavation of every description and of whatever substances encountered shall be performed to the depths indicated or as otherwise specified. During excavation material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid over-loading and to prevent slides or cave-ins. All excavated materials not required or suitable for back-fill shall be removed and disposed of offsite at the CONTRACTOR's expense. Grading shall be done as necessary to prevent surface water from flowing into trenches or other excavations, and any water accumulating therein shall be removed by pumping or by other approved methods. Sheet piling and shoring shall be done as necessary for the protection of the work and for the safety of personnel. Excavation shall comprise all materials encountered, including rock and filled-in material of whatever nature is involved.
- C. The conduits shall be laid and maintained to lines and grades established by the plans and specifications with fittings and foundations at the required locations unless otherwise approved by the ENGINEER.
- D. Prior to excavation investigation shall be made to the extent necessary to determine the location of existing underground utilities, structures and conduits.
CONTRACTOR shall exercise care during excavation to avoid damage to existing utilities and structures.
- E. When obstructions that are not shown on the plans are encountered during the progress of work and interfere so that an alteration of the plans is required the ENGINEER will alter the plans or order a deviation in line and grade or arrange or removal, relocation or reconstruction of the obstructions.
- F. When crossing existing pipelines or other structures, alignment and grade shall be adjusted as necessary, with the approval of the ENGINEER, to provide clearances as required by federal, state, or local regulations or as deemed necessary by the ENGINEER to prevent future damage or contamination of either structure.

3.03 TRENCHING - GENERAL

- A. The trench shall be excavated to the required alignment, depth and width and in conformance with all federal, state, and local regulations for the protection of the workmen.
- B. No excavation for the installation of conduit will be commenced which cannot be completed and back-filled within 24 hours.
- C. Discharge from any trench de-watering pumps shall be conducted to natural drainage channels, storm sewers, or an approved reservoir.

D. Excavated material shall be placed in a manner that will not obstruct sidewalks, driveways, or other structures and shall be done in compliance with federal, state, or local regulations

E. Removal of pavement and road surfaces shall be a part of the trench excavation and the amount removed shall depend upon the width of trench required for the installation of conduits. The dimensions of pavement removed shall not exceed the dimensions of the opening required for installation of conduits by more than 6 inches in any direction unless required or approved by the OWNER. Cut pavement edges shall be sawn to ensure breakage of pavement along straight lines. There is nothing in these Specifications that precludes punching or boring of conduit under streets, sidewalks, parking lots, or other paved areas as long as minimum cover requirements are met.

F. The width of the trench at the top of the conduit shall be that of the single-pass capabilities of normally available excavating equipment and ample to permit the conduit to be installed properly and allow the back-fill to be placed as specified. Trenches shall be of extra width, when required, to permit the placement of timber supports, sheeting, bracing, and appurtenances.

G. When excavation of rock is encountered, all rock shall be removed to provide a clearance of at least 9 inches below and on each side of all conduits. When excavation is completed, a bed of sand, crushed stone or earth that is free from stones, large clods, or frozen earth shall be placed on the bottom of the trench to the previously mentioned depths, leveled, and tamped. These clearances and bedding procedures shall also be observed for pieces of concrete or masonry and other debris or subterranean structures, such as masonry walls, piers, or foundations that may be encountered during excavation. This installation procedure shall be followed when gravel formations containing loose boulders greater than 8 inches in diameter are encountered. In all cases, the specified clearances shall be maintained between the bottom of all conduit and appurtenances and any part, projection, or point of rock, boulder, or stones of sufficient size and placement that may cause a fulcrum.

H. Should the trench pass over a sewer or other previous excavation, the trench bottom shall be sufficiently compacted to provide support equal to that of the native soil or conform to other regulatory requirements in a manner that will prevent damage to the existing installation.

I. Blasting for excavation shall be permitted only after securing the approval of the OWNER who will establish the hours of blasting. The blasting procedure, including protection of persons and property, shall be in strict accordance with federal, state, and local regulations.

J. Trees, shrubs, fences, and all other property and surface structures shall be protected

during construction unless their removal is shown in the plans and specifications or approved by the OWNER. Any cutting of tree roots or branches shall be done only as approved by the OWNER.

K. The CONTRACTOR shall furnish temporary support, adequate protection, and maintenance of all underground and surface structures, drains, sewers, and other obstructions encountered in the progress of the work. All properties that have been disturbed shall be replaced and/or restored as nearly as practical to their original condition.

L. When the sub-grade is found to be unstable or to include ashes, cinders, refuse, organic material, or other unsuitable material, such material shall be removed, to a minimum of at least 12 inches, or to the depth ordered by the ENGINEER and replaced under the directions of the ENGINEER with clean stable back-fill material.

When the bottom of the trench or the sub-grade is found to consist of material that is unstable to such a degree that, in the judgment of the ENGINEER it cannot be removed, a foundation for the conduit and or appurtenance shall be constructed using piling, timber, concrete, or other materials at the direction of the ENGINEER. Appropriate traffic control devices shall be provided in accordance with federal, state, or local regulations to regulate, warn, and guide traffic at the work site.

3.04 BACKFILLING - GENERAL

A. The trenches shall not be back-filled until the conduit as installed conforms to the requirements specified. Backfilling prior to approval of the ENGINEER or the OWNER is prohibited. Where, in the opinion of the ENGINEER damage is likely to result from withdrawing sheeting, the sheeting shall be left in place. Except as otherwise specified for special conditions of over-depths, trenches shall be back-filled to the ground surface with material that is suitable for the compaction specified hereinafter. Trenches improperly back-filled shall be reopened at the CONTRACTOR'S expense to the depth required for Proper compaction then refilled and compacted as specified, or the condition shall be otherwise corrected as approved.

B. All buried conduits and or underground electrical cables shall have a red Polyethylene "Caution Electrical Cable Buried Below" warning tape buried between the conduits and electrical cables and the surface of the ground providing a defense and warning against accidental dig-ins. APWA color guidelines shall be used for electrical power-lines. Tape shall be made of low density polyethylene and highly stretchable Tape shall be placed approximately 12 inches above conduits and or power cable nearest the surface of the ground.

C. In the lower portion of the trench back-fill material shall be deposited in 6 inch maximum thickness layers and compacted with suitable tampers to the density of the

adjacent soil or graded as hereinafter specified until there is a cover of not less than 6 inches over the conduit. The back-fill material in this portion of the trench shall consist of a selected material at a moisture content that will facilitate compaction, free from stones larger than 3 inches in any dimension and hard clods and frozen conglomerates larger than 6 inches in any dimension, except that where the pipe is coated or wrapped for protection against corrosion the back-fill material shall be free from stones larger than 1 inch in any dimension. If any portion of the cover in the lower portion of the trench is in the depth of special compaction and materials requirements under pavement, the special requirements shall control. Special care shall be taken not to damage the coating or wrapping of conduits.

D. Except for special materials for pavements, turf or seeded areas, and sidewalks the remainder of the trench shall be back-filled with material that is free of stones larger than 6 inches or $\frac{1}{2}$ the layered thickness, whichever is smaller, in any dimension. Backfill material shall be deposited in layers not exceeding 12 inches, and each layer shall be compacted to the minimum density specified as applicable to the particular area. Degree of compaction shall be 90 percent.

E. Unpaved surfaces disturbed during the installation of conduits shall be restored to their original elevation and condition. Topsoil shall be preserved carefully and replaced after the back-filling is completed Refer to Section 02630, Landscaping, for seeding and fertilizing requirements.

F. The CONTRACTOR shall patch pavement, sidewalks, curbs, and gutters where existing surfaces are removed for construction. Graded aggregate base course shall have a maximum aggregate size of $\frac{1}{2}$ inches. Base course shall be primed with a compatible tack coat prior to paving. Thickness of base course shall match existing but shall be at least 6 inches. Asphalt concrete shall be hot plant mixed and hot laid. Maximum aggregate size shall be $\frac{1}{2}$ inch and pavement thickness shall match existing thickness, but shall be at least 2 inches. Portland cement concrete pavement, sidewalks, curbs, and gutters, shall be repaired using 3,000 PSI concrete. Pavement thickness shall match existing thickness but shall be at least 6 inches. Sidewalk thickness and curb and gutter cross-sections shall match the existing.

G. Under paved areas or other areas indicated by the plans, back-fill trenches from 12 inches above the pipe to pavement base course in six-inch layers to 95 percent of maximum density as determined by AASHTO T180.

H. Under turf or seeded areas and sidewalks, back-fill trenches from 6 inches above the pipe to finished grade in 12 inch layers to 95 percent of maximum density as determined by AASHTO T180.

END OF SECTION



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-69

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Edwards St to Hall Ave -Construction Contract

Title: Approve and Authorize Mayor to execute contract between the City of Hattiesburg and Walters Construction in the amount of \$ 240,620.20 for construction services related to the Edwards Street to Hall Avenue Pathway Project.

Type: Action Item

Drafter: Marie Harris

In Control: City Council

Reference: Lamar
Rutland

Attachments: Edwards St to Hall Ave Contract, Revised - Edwards St. to Hall Ave. Contract

File
Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication
Information:

History of Legislative File

*CONTRACT DOCUMENTS AND TECHNICAL
SPECIFICATIONS*

FOR

**EDWARDS STREET TO HALL
AVENUE PATHWAY**

FOR THE

**CITY OF HATTIESBURG
HATTIESBURG, MISSISSIPPI
FORREST COUNTY**



AUGUST, 2016

PREPARED BY



CONTENTS

Bidders Information and Bid Forms

Advertisement for Bids	00030-1
Instructions to Bidders	00100-1
Bidder's Proposal	00300-1
Contract Forms.....	00500-1

Project Manual

EJCDC	00700-1
Supplementary Conditions.....	00800-1

Technical Specifications

Division 01 – General Requirements

01010 Summary of Work	01010-1
01025 Measurement and Payment	01025-1
01026 Schedule of Values	01026-1
01027 Applications for Payment	01027-1
01030 Special Project Procedures.....	01030-1
01041 Project Coordination	01041-1
01041.1 Utility Coordination	01041.1-1
01045 Cutting and Patching.....	01045-1
01050 Field Engineering.....	01050-1
01060 Regulatory Requirements.....	01060-1
01200 Project Meetings	01200-1
01310 Construction Schedules.....	01310-1
01340 Shop Drawings, Project Data, and Samples.....	01340-1
01410 Testing Laboratory Services	01410-1
01600 Material and Equipment.....	01600-1
01630 Substitutions	01630-1
01710 Cleaning	01710-1
01720 Project Record Documents	01720-1
01740 Warranties and Bonds.....	01740-1

Division 907 — Special Provisions to *MS Standard Specifications for Road and Bridge Construction*

907-227-10	Hydroseeding
907-237-4	Wattles
907-304-13	Granular Courses
907-401-7	Asphalt Pavement
907-403-14	Asphalt Pavement
907-407-2	Tack Coat
907-626-25	Thermoplastic Traffic Markings

ADVERTISEMENT FOR BIDS

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

Sealed bids will be received by the City of Hattiesburg, at the City Clerk's office, Mississippi, hereafter referred to as Owner, located at 200 Forrest Street, Hattiesburg, Mississippi, 39401, until 10:00 A.M., Local Time, Thursday, **October 13, 2016** for supplying all labor, equipment, and materials (as specified) necessary for the construction of the above referenced project. Work consists of constructing a 10' asphalt pathway along an abandoned rail bed from Edwards Street to Hall Avenue.

The above general outline of features of the work does not in any way limit the responsibility of the Contractor to perform all work and furnish all labor, equipment and materials required by the specifications and the drawings referred to therein.

Bidder must be qualified under Mississippi Law and show current Certificate of Responsibility issued by the Mississippi State Board of Public Contractors establishing his classification as to the value and type of construction on which he is authorized to bid.

Each Bidder shall write his Certificate of Responsibility Number on the outside of the sealed envelope containing his proposal.

Proposals shall be submitted in duplicate, sealed and deposited with the Owner prior to the hour and date hereinbefore designated. No bidder may withdraw his bid within 90 days after the actual date of the opening thereof.

Each Bidder must submit with his proposal a separate attachment stating his qualifications to perform the work. The Statement of Qualifications shall list past projects of similar size and nature, a list of references with name and telephone number, a list of key personnel who will perform the work, and other information supporting the bidder's qualifications.

Awarding public contracts to non-resident Bidders will be on the same basis as the non-resident bidder's state awards contracts to Mississippi Contractors bidding under similar circumstances. In order to ensure that Mississippi's so-called Golden Rule is followed state law requires a non-resident bidder is to attach to his bid a copy of his resident state's current laws pertaining to such state's treatment of non-resident contractors.

Each Bidder must deposit with his proposal, a Bid Bond or Certified Check in an amount equal to five percent of his bid, payable to the Owner, as bid security. Bidders shall also submit a current financial statement, if requested, by the Owner. The successful bidder will be required to furnish a Payment Bond and Performance Bond each in the amount of 100 percent of the contract amount.

Copies of the Instructions to Bidders, Bid Forms, Contract Drawings and Contract Specifications (with the exception of the Mississippi Standard Specifications for Road and Bridge Construction) may be procured at the office of the Engineer, Neel-Schaffer located at 704 Hardy Street, Hattiesburg, Mississippi 39401 between the hours of 8:00 A.M. and 5:00 P.M., Local Time, Monday through Friday, upon payment of \$100.00 for each set, which will not be refunded. Checks are to be made payable to the Engineer.

"Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition" as referred to herein, may be purchased from the Mississippi Department of Transportation.

The Owner hereby notifies all Bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged and women's business enterprises will be afforded the full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The Engineer is Neel-Schaffer, Inc., 704 Hardy Street, Hattiesburg, Mississippi 39401; Phone No. (601) 545-1565, Fax No. (601)-545-2267. Geoffrey P. Crosby, P.E. – Senior Project Manager.

The Owner reserves the right to reject any and all bids and to waive any informalities or irregularities therein.

BY: _____
City Clerk
City of Hattiesburg, Mississippi

DATES OF PUBLICATION:

Hattiesburg American

September 11, 2016

September 18, 2016

Clarion Ledger

September 11, 2016

September 18, 2016

INSTRUCTIONS TO BIDDERS

EDWARDS STREET TO HALL AVENUE PATHWAY CITY OF HATTIESBURG, MISSISSIPPI

CONTENTS

1.	Coordination of Specifications	00100-2
2.	Date and Place of Opening of Proposals.....	00100-2
3.	Form for Proposals.....	00100-2
4.	Prequalification	00100-3
5.	Certificate of Responsibility	00100-3
6.	Annual License to Bid	00100-3
7.	Charges for Proposals, Plans and Specifications	00100-3
8.	Omissions and Discrepancies.....	00100-3
9.	Addenda	00100-3
10.	Interpretations	00100-4
11.	Bid Security	00100-4
12.	General Information.....	00100-4
13.	Rejection of Proposal	00100-4
14.	Conditions of Work	00100-5
15.	Security for Faithful Performance	00100-5
16.	Insurance	00100-5
17.	Subcontractors	00100-5
18.	Method of Award – Lowest Responsive Bidder	00100-5
19.	Obligation of Bidder	00100-6
20.	Subsurface Data	00100-6
21.	Execution of Contract	00100-6
22.	Interchangeable Terms.....	00100-6
23.	Qualifications of Bidder, Owner's Rights	00100-6
24.	Materials and Equipment	00100-7
25.	Non-Resident Bidders.....	00100-7
26.	Designating Owner and Engineer	00100-7
27.	Vibratory Roller	00100-7
28.	Materials Testing	00100-7
29.	Contract Time	00100-7

1. COORDINATION OF SPECIFICATIONS

Work under this Contract shall be performed in accordance with the Contract Documents, which includes General Conditions, Supplementary Conditions and Technical Specifications contained therein. Division 200 through 800 of the *Mississippi Standard Specifications for Road and Bridge Construction* (2004 Edition) is made a part hereof as if it were attached hereto, except where superseded by special provisions contained herein.

2. DATE AND PLACE OF OPENING OF PROPOSALS

The date, time, and place for opening Proposals will be as set out in the published "Advertisement for Bids."

The Owner reserves the right to postpone the date for presentation and opening of Proposals and will give notice of any such postponement to each known prospective Bidder.

3. FORM FOR PROPOSALS

Proposals must be submitted in duplicate on the forms furnished by the Owner and the envelope containing the Proposals must be sealed and addressed to:

City Clerk
City of Hattiesburg
200 Forrest Street
Hattiesburg, Mississippi 39401

The outside of the envelope containing the Proposal shall bear the inscription:

**SEALED BID FOR: EDWARDS STREET TO HALL AVENUE PATHWAY
CITY OF HATTIESBURG, MISSISSIPPI**

BY _____

Certificate of Responsibility No. _____

State License No. _____

The duplicate Proposals shall be in the form of one original Proposal, marked "ORIGINAL" and one photocopy (Xerox or similarly reproduced copy) marked "PHOTOCOPY" of the original Proposal.

If Proposals are forwarded by the U.S. Postal Service, delivery shall be by Registered or Certified Mail.

4. PREQUALIFICATION

Contractors desiring to Bid on proposed construction contracts who have not been prequalified by the Owner, shall file with the Owner a current financial statement showing assets and liabilities as a prerequisite to entering into contracts with the Owner. If prequalification is required, the appropriate submittal information will be requested from bidders during the bid evaluation performed by the Engineer and Owner after receipt of Proposals.

All Bidders must be in good standing with the Owner. Good standing includes, among other things: (a) whether Bidder is currently delinquent on the completion of work or punchlist items under another Owner contract for which it was a successful bidder; (b) whether Bidder is currently in default under another Owner contract for which it was a successful bidder; and (c) whether Bidder has failed to fulfill provisions of another Owner contract for which it was a successful bidder, during the past two years.

5. CERTIFICATE OF RESPONSIBILITY

Prior to filing Bids on Owner projects (in excess of \$50,000), the prospective Bidder must obtain a Certificate of Responsibility from the Mississippi State Board of Public Contractors, establishing his classification as to the value and the type of construction on which he is authorized to bid. Application must be submitted to the Board at least 30 days prior to a regular Board meeting scheduled every Quarter on the first Tuesday of January, April, July and October.

6. ANNUAL LICENSE TO BID (Not Used)

7. CHARGES FOR PROPOSALS, PLANS AND SPECIFICATIONS

Prospective Bidders may obtain Proposal forms including one copy of Contract Documents upon payment of the amount of money stipulated in the "Advertisement for Bids."

No refunds will be made for return of Plans or Specifications.

If a contract award is made, the successful Bidder will be furnished (free of charge) two additional sets of the Plans and Specifications.

In the event all Bids are rejected and the Project is re-advertised, the original Bidders shall **NOT** be entitled to free Bidders Proposal forms for the subsequent letting.

8. OMISSIONS AND DISCREPANCIES

Should a Bidder find discrepancies, errors or omissions in the Drawings or Specifications, or should he be in doubt as to the correctness of the Plan details, dimensions and layout, he should immediately notify the Engineer in order to permit checking and any necessary revisions or modifications.

9. ADDENDA

Prior to the date set for opening of Bids, the right is reserved, in the interests of the Owner, as it may require, to revise or amend the Contract Documents. Such revisions, if any, will be announced by an Addendum or Addenda, and copies of such Addenda will be furnished to all prospective Bidders who have purchased Plans and Specifications for acknowledgment by return fax. If the revisions and

Addenda are of a nature which require material changes in quantities or prices Bid, or both, the date set for opening Bids may be postponed to enable Bidders to revise their Bids. In such case, the Addendum or Addenda will include an announcement of the new date for opening Bids.

10. INTERPRETATIONS

No oral interpretation made to any Bidder as to the meaning of the Contract Documents shall be considered an effective modification of any of the provisions of the Contract Documents. In order to ensure appropriate and concise responses, and avoid any misinterpretations, no verbal questions will be received. Written requests for interpretation of the Plans and Specifications shall be submitted to the Engineer at least 10 days prior to opening of Proposals so that a formal decision can be given in writing to all known prospective Bidders in the form of an Addendum. The Contract Document contains the provisions required for the construction of the Project. Information obtained from an officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the Contract.

11. BID SECURITY

All Bids shall be accompanied by a Bid Security in the form of a Certified Check upon a national or state bank or a Bid Bond made by a bonding company registered in the State of Mississippi, drawn and made payable to the Owner in an amount equal to five percent of the Bid. The Certified Check or Bid Bond must be enclosed in the same envelope with the Bid. Except as noted below, the Bid Security of all known unsuccessful Bidders will be returned promptly after a Notice of Award has been sent to the successful Bidder or in the event that all Bids are rejected.

The Bid Security of the next two lowest qualified Bidders will be retained until the Contract has been executed with the lowest qualified Bidder. The Bid Security of the successful Bidder will be returned when satisfactory Performance and Payment Bonds have been furnished and approved and the Contract executed.

12. GENERAL INFORMATION

Bidders shall inform themselves and comply with all pertinent Owner regulations and ordinances, State and Federal laws, licenses and tax liabilities which may in any manner affect their Bids and the prosecution of the work. The successful bidder will be responsible for obtaining all building, plumbing, and electrical permits required by the local city government. Special attention is directed to the rules and regulations published by the Mississippi State Tax Commission outlining certain taxes imposed on Contractors by the state of Mississippi.

13. REJECTION OF PROPOSAL

Proposals may be rejected in the case of any omission, alterations of forms, additions or conditions not called for, unauthorized alternate Bids, incomplete Bids, erasures or irregularities of any kind. Bids received conditioning their consideration or rejection upon Bids for the other work submitted by the same Bidder may be classed as irregular, unless the Contract Documents specifically invite or permit conditional or combination Bids. Bids in which the prices obviously are unbalanced may be rejected.

14. CONDITIONS OF WORK

Each Bidder must inform himself fully of the conditions relating to the construction of the Project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all materials and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

15. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with his delivery of the Executed Contract, the Contractor shall furnish a Performance Bond and a Payment Bond each in the sum of 100% of the Contract amount as security for faithful performance of his Contract and for the payment of all persons performing labor on the Project under his Contract and furnishing materials in connection with his Contract, as specified in the Contract Documents. The surety of such Bonds shall be issued by a duly authorized surety company listed on the Treasury Department's most current list Circular 570 (as amended) and satisfactory to the Owner.

Attorneys in fact who sign Bid Bonds or Payment Bonds and Performance Bonds must file with each bond a certified and effective dated copy of their Power of Attorney. Failure of the successful Bidder to execute the Contract and to supply the required bonds within 10 calendar days from the date that the Notice of Award is delivered, or within such extended period as the Owner may grant based upon reasons determined sufficient by the Owner, shall constitute a default, and the Owner, at his discretion, may either award the Contract to the next lowest qualified Bidder or readvertise for Bids, and may charge against the Bidder the difference between the amount for which a Contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the Bid Bond. If a more favorable bid is received by readvertising, the defaulting Bidder shall have no claim against the Owner for a refund. The Contractor's bond will not be released until all provisions of the Contract have been fulfilled.

16. INSURANCE

The Contractor will be required to carry the types and amounts of insurance named in the Contract Documents for the full life of the Contract.

17. SUBCONTRACTORS

Bidders are specifically advised that any person, firm or other party to whom it is proposed to award a Subcontract must be acceptable to the Owner. Nothing contained in the Contract Documents shall create any contractual relation between subcontractor and the Owner.

18. METHOD OF AWARD – LOWEST RESPONSIVE BIDDER

The Owner will award the Contract to the lowest and best Bid unless all Bids are rejected. The award will be based on the evaluation of the low bid for the total base bid or the total alternate bid as decided upon by the Owner.

The responsiveness of the low Bidder shall be determined by (1) the completeness and regularity of the Bidders Proposal; (2) the Bidders Proposal being without exclusions or special conditions; (3) the Bid Form having no alternative Bids for any item unless requested in the Technical Specifications;

and (4) such other factors as may be considered under State law, Federal law or regulation.

The evaluation of the low bidder will be based on whether the Bidder (1) maintains a permanent place of business; (2) has adequate plant equipment to do the work properly and within the time limit that is established; (3) has adequate financial status to meet his obligations contingent to the work; (4) has adequate manpower and present workload is such that he can perform according to a reasonable schedule; and (5) such other factors as may be considered under State law, Federal law or regulation.

19. OBLIGATION OF BIDDER

At the time of the opening of Bids, each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Plans and Contract Documents (including all Addenda).

The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to his Bid. Submission of Bid shall be accepted as prima facie evidence that Bidder has inspected the site and is familiar with the Plans and Contract Documents.

20. SUBSURFACE DATA

Not Used.

21. EXECUTION OF CONTRACT

If the successful Bidder is a corporation, the officer who signs the Contract shall furnish copies of the resolution of the Directors of the corporation authorizing him to sign the contract. Such resolution should bear the seal of the corporation.

Subject to the applicable provisions of law, the Contract shall be in full force and effect only from and after the date when a fully executed and approved counterpart thereof has been rendered or delivered, or both, to the Contractor or his duly authorized agent or representative. Deposit of said counterpart in the United States mail in an envelope or wrapper properly addressed shall constitute compliance with these provisions by the Owner.

22. INTERCHANGEABLE TERMS

The terms "Bid" and "Proposal" wherever they are used in the Contract Documents are interchangeable and have the same meaning. The terms "Contract" and "Agreement", are interchangeable and have the same meaning. The terms "Contract Drawings" and "Plans", are interchangeable and have the same meaning.

23. QUALIFICATIONS OF BIDDER, OWNER'S RIGHTS

The Owner may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

24. MATERIALS AND EQUIPMENT

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a manufacturer, fabricator, supplier, or distributor, the naming of the item in this manner is intended to establish the type, function and quality required. Materials or equipment of other manufacturers, fabricators, suppliers, or distributors may be accepted by the Engineer if sufficient information is submitted by the Contractor to allow the Engineer to determine that the material or equipment proposed is equivalent to that named in the Contract Documents. Bidders are referred to Section 6.3 of the General Conditions regarding procedures for approval of substitute materials and equipment.

25. NON-RESIDENT BIDDERS

Awarding public contracts to non-resident Bidders will be on the same basis as the non-resident Bidder's state awards contractors to Mississippi Contractors bidding under similar circumstances. In order to ensure that Mississippi's so called "Golden Rule" is followed, state law requires a non-resident Bidder to attach to his bid a copy of his resident state's current laws pertaining to such state's treatment of non-resident contractors.

26. DESIGNATING OWNER AND ENGINEER

Any reference in the Contract Documents to the State of Mississippi, Mississippi Department of Transportation, Mississippi Transportation Commission, or any official thereof shall be interpreted to mean the City of Hattiesburg, Mississippi, the "Owner".

Any reference in the Standard Specifications to the Project Engineer, District Engineer, Office Engineer, or Engineer shall be interpreted to mean the Engineer for the City of Hattiesburg, Mississippi, Neel-Schaffer, Inc.

27. VIBRATORY ROLLER

Bidders are advised that the use of vibratory rollers **will not** be allowed and the lot density required in Subsections 401.02.6.4.1 and 401.03.1.4 shall be **reduced by one percent (1%)**.

28. MATERIALS TESTING

The Contractor shall be responsible for all testing of materials associated with the project. Materials shall be tested in accordance to the requirements and frequencies outlined in the *Mississippi Standard Specifications for Road and Bridge Construction* (2004 Edition), and shall be considered an absorbed item.

29. CONTRACT TIME

The number of calendar days to complete the work will be **60** calendar days.

The calendar date for completion of the work to be performed by the Contractor for this project shall be a specified completion date. The specified completion date for this project will be calculated by adding the above number of calendar days to the date of the notice to proceed.

BIDDER'S PROPOSAL
EDWARDS STREET TO HALL AVENUE PATHWAY
CITY OF HATTIESBURG, MISSISSIPPI

CONTENTS

Bidder's Proposal	00300-2
Prices Bid and Approximate Quantities	00300-4
Bidder's Corporate Declaration	00300-7
Non-Collusion Affidavit	00300-8
Bid Bond	00300-9
Proposed Subcontractors	00300-11

COPY

BIDDER'S PROPOSAL

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

DATE: October 20, 2014

PROPOSAL OF Scottie Watkins
(Name of Bidder)

2051 Hwy 84E Laurel MS 39443
(Address of Bidder)

for construction of the Edwards Street to Hall Avenue Pathway.

The documents on which this Proposal is based include the Instructions to Bidders, Bid Forms, General Conditions, Supplementary Conditions, Supplemental General Conditions, Technical Specifications, Contract Drawings, and all supplements, amendments and addenda for this Project and are made a part hereof by reference.

**TO: CITY OF HATTIESBURG
200 FORREST STREET
HATTIESBURG, MISSISSIPPI 39401**

Gentlemen:

The following Proposal is submitted on behalf of the undersigned Bidder(s) and no others. Evidence of my (our) authority to submit the Proposal is hereby furnished. The Proposal is submitted without collusion on the part of any person, firm or corporation.

I (We), the undersigned Bidder(s), certify that I (we) have carefully examined the Instructions to Bidders, Bid Forms, General Conditions, Supplemental Conditions, Technical Specifications, Contract Drawings and any and all Addenda thereof.

I (We) further certify that I, (we) have visited and carefully examined the site of the proposed Work and have inspected the location and condition of all public utilities and existing structures or other facilities on the site or adjacent thereto which may be affected by the proposed construction and fully understand all conditions relative to construction difficulties, hazards, labor, transportation and all other factors affecting the prosecution of the work covered by this Proposal.

I (We) understand that the quantities mentioned below are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid. No increase in quantities of work shall be performed until a written change order is duly executed in advance and approved in the public minutes of the Owner.

00300-2

COPY

Prices Bid and Approximate Quantities – Base Bid

Pay Item	Description	Qty	Unit	Unit Price	Price Extension
201-A	CLEARING AND GRUBBING	0.2	ACRE	6,200.00	12,400.00
203-A	UNCLASSIFIED EXCAVATION, AH, LVM	75	CY	12.00	900.00
203-G	EXCESS EXCAVATION, AH, LVM	20	CY	16.00	320.00
203-EX	BORROW EXCAVATION, B-9, AH, LVM	500	CY	18.00	9000.00
211-B	TOPSOIL FOR SLOPE TREATMENT, CONTRACTOR FURNISHED	350	CY	24.00	8,400.00
907-227-A	HYDROSEEDING	1.5	ACRE	1,950.00	2,925.00
234-A	TEMPORARY SILT FENCE	1000	LF	3.25	3,250.00
907-237-A	WATTLES, 12"	100	LF	8.25	825.00
907-304-G	SIZE 610 CRUSHED STONE BASE	700	CY	86.10	60,270.00
907-403-A	9.5MM, ST, ASPHALT PAVEMENT	445	TON	100.00	44,500.00
907-407-A	ASPHALT FOR TACK COAT	270	GAL	4.50	1,215.00
607-B	60" CHAIN LINK FENCE	150	LF	29.10	4,365.00
618-A	MAINTENANCE OF TRAFFIC	1	LS	XXXX	6,000.00
618-B	ADDITIONAL CONSTRUCTION SIGNS	1	SF	\$10	\$10
620-A	MOBILIZATION	1	LS	XXXX	19,500.00
815-B	GROUTED RIPRAP	410	SY	70.00	28,700.00
815-E	GEOTEXTILE UNDER GROUTED RIPRAP, TYPE V, NON-WOVEN	410	SY	2.40	984.00
TOTAL BASE BID \$				197,404.00	

Prices Bid and Approximate Quantities – Add Option No. 1

Pay Item	Description	Qty	Unit	Unit Price	Price Extension
630-A	STANDARD ROADSIDE SIGNS, SHEET ALUMINUM, 0.080" THICKNESS	530	SF	34.30	18,179.00
630-C	STEEL U-SECTION POSTS, 3.0 TO 3.5 LB/FT	1050	LF	4.36	4,578.00
907-626-PP	THERMOPLASTIC LEGEND, WHITE, ROAD, 4' HEIGHT	12	EACH	256.00	3,072.00
907-626-PP	THERMOPLASTIC LEGEND, WHITE, XING, 4' HEIGHT	12	EACH	256.00	3,072.00
907-626-PP	THERMOPLASTIC LEGEND, WHITE, XING, 8' HEIGHT	12	EACH	485.85	5,830.20
907-626-PP	THERMOPLASTIC LEGEND, WHITE, BIKE SYMBOL, 8' HEIGHT	12	EACH	353.75	4,245.00
907-626-Z	THERMOPLASTIC LEGEND, WHITE, 6" EQUIVALENT	3300	LF	2.80	9,240.00
TOTAL ADD OPTION NO. 1 \$					48,216.20

THE BIDDER'S TOTAL ABOVE IS HIS TOTAL BID BASED ON HIS UNIT PRICES AND LUMP SUM PRICES AND THE ESTIMATED QUANTITIES. THIS FIGURE IS FOR INFORMATION ONLY AT THE TIME OF OPENING BIDS. THE OWNER WILL MAKE THE BID TABULATION FROM THE UNIT PRICES AND LUMP SUM PRICES BID. IF THERE IS AN ERROR IN THE TOTAL BY THE BIDDER, IT SHALL BE CHANGED AS ONLY THE UNIT PRICES AND LUMP SUM PRICES SHALL GOVERN.

NOTE: FAILURE OF BIDDER TO INCLUDE PRICES FOR THE ALTERNATE BID ITEMS MAY RENDER HIS PROPOSAL NON-RESPONSIVE.

NOTE: Bids shall include sales tax and all other applicable taxes and fees.

COPY

COPY

I (We) further propose to execute the Contract Agreement as bound herein within ten working days after receipt of Contract Forms from the Owner and to complete the work within the contract time. I (We) agree to pay as liquidated damages the actual costs, expenses and other losses reasonably incurred by Owner for each consecutive calendar day beyond the specified Contract Time.

I (We) also propose to execute a Performance Bond and a Payment Bond, as shown in the Specifications, each in an amount of not less than one hundred percent (100%) of the total of my (our) Bid. These Bonds shall not only serve to guarantee the completion of the Work on my (our) part, but also to guarantee the excellence of both workmanship and materials until the Work is finally accepted.

I (We) enclose a Bid Bond or Certified Check for 5 percent of One Hundred Ninety-two Thousand Four Hundred Four & no cents DOLLARS (\$ 192,404.00)
(Base Bid Amount)

and hereby agree that in case of my (our) failure to execute the Contract and furnish the Bonds within ten calendar days after delivery of the Notice of Award, the amount of this check (Bid Bond) will be forfeited to the Owner as liquidated damages arising out of my (our) failure to execute the Contract as proposed.

It is understood that in case I (we) am (are) not awarded the Work, the Certified Check or Bid Bond submitted as Bid security will be returned as stipulated in the Contract Documents.

Bidder acknowledges receipt of the following Addenda:

No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____

Respectfully Submitted,


Contractor(s)

By: President
Title

2051 Hwy 84E
Lumbert MS 39443
Address

COPY

BIDDER'S CORPORATE DECLARATION

(TO BE FILLED IN IF BIDDER IS A CORPORATION)

Date: October 20, 20 16.

Our corporation is chartered under the Laws of the state of Mississippi and the names, titles and business addresses of the executives are as follows:

Scottie Watkins
President

Brenda Watkins
Secretary

2051 Hwy 84E
Laurel MS 39443

2051 Hwy 84E
Laurel MS 39443

Brenda Watkins
Treasurer

2051 Hwy 84E
Laurel MS 39443

DECLARATION OF PARTNERSHIP

(To be filled in if a Bidder is a Partnership)

Our Partnership is composed of the following individuals:

Address

Address

COPY

NON-COLLUSION AFFIDAVIT

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

(THIS AFFIDAVIT MUST BE EXECUTED FOR THE BID TO BE CONSIDERED)

STATE OF Mississippi

COUNTY OF Forrest) ss.

Scottie Walker being first duly sworn,
(Person)
deposes and says that he is President

(Sole owner, a partner, president, secretary, etc.)

of Walker Construction Co. Inc. the party making the foregoing Proposal or Bid;
(Name of Firm)

that such Bid is genuine and not collusive; that said Bidder is not financially interested in, or otherwise affiliated in a business way with any other bidder on the same contract; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person or persons interested in the proposed contract; and that all statements contained in said Proposal or Bid are true; and further, that such Bidder has not, directly or indirectly submitted his Bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.

Scottie Walker
Affiant

Sworn to and subscribed before me this 20 day of October, 2016

Rhonda J. Ballard
Notary Public in and for

Jones County,

My Commission Expires

8-31, 2020



00300-8

COPY

PROPOSED SUBCONTRACTORS

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

The names and addresses of all persons and parties who will be utilized for subcontract Work in the foregoing Bidder's Proposal are listed below. (The Contractor must list all Subcontractors to be utilized on the Work. Failure to list Subcontractors may cause the Bidder's Proposal to be rejected by the Owner as non-responsive.) If the Bidder does not propose Subcontractors, so state.

NAME	ADDRESS
<u>Road-Pro Safety, Inc.</u>	<u>P.O. Box 54292 Jackson MS 39288</u>
<u>T.L. McCarl Contractors Inc.</u>	<u>P.O. Box 1765, Pascagoula MS 39568</u>
<u>Tony Thomsberry</u>	<u>2910 Hwy 84E Lumbert, MS 39443</u>
<u>RTM McQueen Contracting Inc.</u>	<u>80 Ramsey McQueen Rd Collins MS 39428</u>
<u>A+ Sealing & Striping, Inc.</u>	<u>58 Ingeam Rd Lumbert MS 39443</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

THE AMERICAN INSTITUTE OF ARCHITECTS

COPY

AIA Document A310 Bid Bond

KNOW ALL MEN BY THESE PRESENTS, THAT WE Walters Construction Co., Inc.

2051 Highway 84 East, Laurel, MS 39443

as Principal, hereinafter called the Principal, and SureTec Insurance Company

1330 Post Oak Boulevard, Suite 1100, Houston, TX 77056

a corporation duly organized under the laws of the State of TX

as Surety, hereinafter called the Surety, are held and firmly bound unto City of Hattiesburg

200 Forrest Street, Hattiesburg, MS 39401

as Obligee, hereinafter called the Obligee, in the sum of Five Percent of Amount Bid

Dollars (\$ 5%),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Edwards Street to Hall Avenue Pathway City of Hattiesburg,
Mississippi

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and materials furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 20th day of October, 2016

Walters Construction Co., Inc.

(Principal)

(Seal)

By: [Signature]

President

(Title)

(Witness)

SureTec Insurance Company

(Surety)

(Seal)

By: [Signature]

Attorney-in-Fact G. Ford Mosby

(Title)

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

G. Ford Mosby

Jackson, MS

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Surety Bond No.: Bid Bond

Principal: Walters Construction Co., Inc.

Obligee: City of Hattiesburg

Amount: See Bond Form

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of March, A.D. 2013.

SURETEC INSURANCE COMPANY

By:

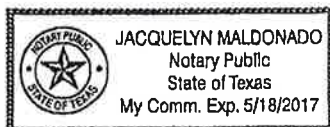
John Knox Jr., President

State of Texas
County of Harris

ss:



On this 21st day of March, A.D. 2013 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 20th day of October, 2016, A.D.

M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.

For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.

CONTRACT FORMS

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

CONTENTS

Contract.....	00500-2
Partnership Certificate	00500-5
General Instructions for Bonds	00500-6
Performance Bond	00500-7
Payment Bond.....	00500-9
Notice of Award.....	00500-11
Notice to Proceed.....	00500-13
Contract Change Order	00500-15

CONTRACT

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

This Contract, made this the _____ day of _____, 20____, by and between the City of Hattiesburg, Mississippi, a municipal corporation, hereinafter called "Owner" and _____ doing business as a _____ located in _____ hereinafter called the "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. THE CONTRACTOR will commence and complete the "Edwards Street to Hall Avenue Pathway" project in strict accordance with the Contract Documents and the Contract Drawings.
2. The Contractor will commence the work required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED and will attain Final Completion within the contract time stipulated in the Advertisement for Bids unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS. The Contractor agrees to pay, as liquidated damages, the actual damages, costs, losses and expenses reasonably incurred by Owner for each consecutive calendar day that he shall be in default in attaining Final Completion within the time stipulated as provided herein.
3. The term "CONTRACT DOCUMENTS" means and includes Advertisement for Bids, Instructions to Bidders, Bidder's Proposal, Bid Bond, Contract, Payment Bond, Performance Bond, General Conditions, Supplementary Conditions, Technical Specifications, Contract Drawings, Notice of Award, Notice to Proceed, Addenda (if any), and all subsequent Change Orders, Supplemental Agreements and/or other modifications as if formally recopied in this Contract.
4. The Contractor agrees to furnish all materials in place and to faithfully complete all of said work contemplated by this Contract in good and workmanlike manner, strictly in accordance with said Contract Documents, Contract Drawings and other requirements of the Owner, and to the complete satisfaction of the Owner or his authorized representatives, and in accordance with the Laws of the state of Mississippi and the Ordinances of the Owner, for which the Owner hereby agrees to pay and the Contractor agrees to accept a sum of money in current funds equal to the contract amount of _____ (\$ _____) plus the amount of any supplemental agreements and force accounts for extra work authorized and duly set forth in a written change order approved and executed by the Owner and set forth in the public minutes of the Owner and in full compensation for furnishing all materials, the doing of all work contemplated under the Contract, as well as all loss or damage, if any, arising out of the nature of the work, or the action of the weather, and any and all other unforeseen obstructions or difficulties that may be encountered in the prosecution of the same, the Contractor assuming all risks of every kind and description in the performance of this

Contract.

5. The Contractor shall protect, indemnify and save harmless the Owner from and against any and all damage, loss, claims, judgments or expenses, including but not limited to reasonable attorney's fees, which the Owner may suffer or be subjected to by the performance of the work, including but without limitation injury to or death of any person whomever and destruction or damage to any property whatsoever.
6. Attached hereto and made a part of this Contract is a Performance Bond, executed by a Surety Company doing business in the state of Mississippi, in the sum of

(\$_____).
7. Attached hereto and made a part of this Contract is a Payment Bond, executed by a Surety Company doing business in the state of Mississippi, in the sum of

(\$_____).
8. The Contractor agrees to allow the Owner, or any of their duly authorized representatives, access to any books, documents, papers and records of the Contractor which are directly pertinent to the project which is the subject of this Contract, for the purpose of making audits, examinations, excerpts and transcriptions, and Contractor agrees to insert an identical clause in any and all subcontracts.
9. The Owner will pay to the Contractor in the manner and at such times and amounts as set forth in the Contract Documents.
10. This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.
11. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the Owner shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five days before the effective date of such termination. Notwithstanding the above, the Contractor shall not be relieved of liability to the Owner for damages sustained by the Owner by virtue of any breach of the Contract by the Contractor and the Owner may withhold any payments to the Contractor until such time as the exact amount of damages due the Owner from the Contractor is determined.

IN WITNESS THEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in _____ counterparts, each of which shall be deemed an original on the date first above written. (number)

OWNER

CONTRACTOR

BY _____

BY _____

ATTEST _____

ATTEST _____

(Seal)

(Seal)

PARTNERSHIP CERTIFICATE

State of _____

County of _____ Ss.

On this _____ day of _____, 20_____, before me personally appeared _____, known to me and known by me to be the person who executed the above instrument, who being by me first duly sworn, did depose and say that he is a general partner in the firm of _____; that said firm consists of himself and _____; and that he executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

Notary Public in the

County of _____

State of _____

Notary Seal

My Commission Expires:

CORPORATE CERTIFICATE

I, _____ certify that I am the Secretary of the Corporation named as Contractor in the foregoing Contract; that _____, who signed said Contract on behalf of the Contractor was then _____ of said Corporation; that said Contract was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.

Secretary

Corporate Seal

GENERAL INSTRUCTIONS FOR BONDS

1. The surety on each Bond must be a responsible surety company, which is qualified to do business in Mississippi and satisfactory to the Owner.
2. The name, including full Christian name and residence of each individual party to the Bond shall be inserted in the body thereof, and each such party shall sign the Bond with his usual signature on the line opposite the seal and if signed in Maine, Massachusetts or New Hampshire an adhesive seal shall be affixed opposite the signature. The bond must be either signed or countersigned by a Mississippi Resident Agent of the Surety Company.
3. If the principals are partners, their individual names will appear in the body of the Bond with the recital that they are partners composing a firm, naming it; and all the members of the firm shall execute the Bond as individuals.
4. The signature of a witness shall appear in the appropriate place, attesting to the signature of each individual party to the Bond.
5. If the principal or surety is a corporation, the name of the State in which incorporated shall be inserted in the appropriate place in the body of the Bond, and said instrument shall be executed and attested under the corporate seal as indicated in the form. If the corporation has no corporate seal the fact shall be stated, in which case, a scroll or adhesive seal shall appear following the corporate name.
6. The official character and authority of the person or persons executing the Bond for the principal, if a corporation, shall be certified by the secretary or assistant secretary, according to the form attached hereto. In lieu of such certificate there may be attached to the Bond copies of so much of the records of the corporation as will show the official character and authority of the officer signing, duly certified by the secretary or assistant secretary, under the corporate seal, to be true copies.
7. The date of this Bond must not be prior to the date of the Contract in connection with which it is given.
8. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____ hereinafter called Principal, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars,
\$(_____) in lawful money of the United States, for the payment of which sum well
and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these
presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain
contract with the OWNER, dated _____ day of _____ 20 _____,
a copy of which is hereto attached and made a part hereof for the construction of :

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings,
covenants, terms, conditions, and agreements of said contract during the original term thereof, and any
extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the
one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and
shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by
reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the
OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full
force and effect.

NOW, THEREFORE, if the Principal shall promptly make payment of all taxes, licenses, assignments,
contributions, damages, penalties, and interest thereon, when and as the same may lawfully be due the state of
Mississippi, or any county, municipality, board, department, commission, or political subdivision thereof, by
reason of and directly connected with the performance of said Contract or any part thereof as provided by
Sections 27-65-1, 27-65-21, 27-67-301 and 31-5-3, supra, or any other applicable statute or other authority,
then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change,

00500-7

extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this statement is executed in _____ counterparts, each one of which shall
(number)
be deemed an original, this the _____ day of _____, 20 _____.

ATTEST:

(Principal) Secretary
(Seal)

Principal
By _____

(Address)

Witness as to Principal

(Address)

ATTEST:

Witness as to Surety

(Address)

Surety
By _____

(Address)

NOTE: Date of BOND must not be prior to date of Contract.
 If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS THAT

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal,
(Corporation, Partnership, or Individual)

and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____
Dollars, \$(_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____ 20 _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

00500-9

IN WITNESS WHEREOF, this statement is executed in _____ counterparts, each one of which shall
(number)
be deemed an original, this the _____ day of _____, 20 _____.

ATTEST:

(Principal) Secretary
(Seal)

Principal
By _____

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

By _____

Witness as to Surety

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

NOTICE OF AWARD

Date _____

TO: _____

RE: Edwards Street to Hall Avenue Pathway
 City of Hattiesburg, Mississippi

NOTICE OF AWARD

Gentlemen:

The Owner has considered the Proposal submitted by you for the above referenced Work in response to its Advertisement for Bids and Instructions to Bidders.

You are hereby notified that your Proposal has been accepted in the amount of \$_____.

You are required by the Instruction to Bidders to execute the Contract and furnish to the Owner the required Contractor's Performance Bond, Payment Bond and certificates of insurance within 10 calendar days from the date of delivery of this Notice to you. We have enclosed five copies of the necessary contract forms and bond forms. Please return all five copies of these documents to the offices of Neel-Schaffer, 704 Hardy Street, Hattiesburg, MS 39401.

If you fail to execute said Contract and to furnish said Bonds within 10 days from the date of delivery of this Notice, the Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your proposal as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by Law.

You are required by the General Conditions and Supplementary Conditions to submit to Neel-Schaffer, Inc. an estimated progress schedule, a preliminary schedule of Shop Drawing submissions and a preliminary schedule of values of the Work within 10 days after the effective date of this Contract, all in accordance with Article 2.5 of the General Conditions.

00500-11

You are required to return an acknowledged copy of this Notice of Award directly to the City of Hattiesburg, Mississippi, Attention: Lamar Rutland, and to Neel-Schaffer, Inc.

Sincerely,

NEEL-SCHAFFER, INC.

Geoffrey P. Crosby, P.E.
Project Engineer

c: Lamar Rutland, P.E.
City of Hattiesburg
200 Forrest Street
Hattiesburg, MS 39401

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by _____ this, the
_____ day of _____, 20_____.

By _____

Title _____

NOTICE TO PROCEED

Date _____

To: _____

Attention: _____

REFERENCE: NOTICE TO PROCEED
EDWARDS STREET TO HALL AVENUE PATHWAY
CITY OF HATTIESBURG, MISSISSIPPI

Dear _____:

You are hereby notified to commence Work in accordance with the Contract dated _____, on or before _____. You are to complete the Work within ____ consecutive calendar days from the effective date of this Notice to Proceed. The date of Final Completion is therefore _____. Liquidated damages in the amount of the actual damages, costs, losses and expenses reasonably incurred by the OWNER per calendar day for each day the Work has not achieved Final Completion after _____ will be imposed unless the contract time is otherwise adjusted for due cause by change orders to the Contract. Liquidated Damages, as defined herein, will be assessed unless the Contract Time is otherwise adjusted for due cause by change order to the Contract.

The engineering firm of Neel-Schaffer, Inc. will act as the Engineer on behalf of the City of Hattiesburg, Mississippi for the work to be performed under the contract. Geoffrey P. Crosby, P.E., of Neel-Schaffer, Inc. will be the designated representative of the Engineer.

Please return a copy of this NOTICE TO PROCEED and ACCEPTANCE OF NOTICE to the undersigned and to Neel-Schaffer, Inc., indicating your receipt of this document in the space provided below.

Sincerely,

City of Hattiesburg, Mississippi

Lamar Rutland, P.E.
Engineering Director

00500-13

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED

is hereby acknowledged by _____

this, the _____ **day**

of _____, **20**_____.

By_____

Title_____

CONTRACT CHANGE ORDER

OWNER: _____ PROJECT NAME: _____

CONTRACTOR: _____

DATE: _____

CHANGE ORDER NUMBER: _____ CONTRACT NUMBER: _____

REASON FOR CHANGE: _____

YOU ARE HEREBY REQUESTED TO COMPLY WITH THE FOLLOWING CHANGES FROM THE CONTRACT
PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS: (USE ADDITIONAL SHEETS IF REQUIRED)

ITEM NO.	DESCRIPTION OF CHANGE(S) (QUANTITIES, ETC.)	QTY	UNIT COST	TOTAL CONTRACT
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00

TOTAL CONTRACT CHANGE	\$
	TOTAL CONTRACT
ORIGINAL CONTRACT AMOUNT:	\$
CURRENT CONTRACT AMOUNT:	\$
THIS CONTRACT CHANGE	
REVISED CONTRACT AMOUNT:	\$
CURRENT CONTRACT COMPLETION DATE:	
TIME EXTENSION REQUIRED BY CHANGE:	
REVISED CONTRACT COMPLETION DATE:	
THIS DOCUMENT SHALL BE AN AMENDMENT TO THE CONTRACT AND ALL PROVISIONS OF THE CONTRACT WILL APPLY. RECOMMENDED BY: _____ ENGINEER _____ DATE _____ NEEL-SCHAFFER, INC. ACCEPTED BY: _____ CONTRACTOR _____ DATE _____	

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

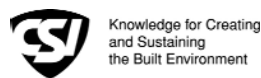
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by



The Associated General Contractors of America



Construction Specifications Institute

Copyright ©2002

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

TABLE OF CONTENTS

	<u>Page</u>
ARTICLE 1 - DEFINITIONS AND TERMINOLOGY.....	6
1.01 <i>Defined Terms</i>	6
1.02 <i>Terminology</i>	8
ARTICLE 2 - PRELIMINARY MATTERS	9
2.01 <i>Delivery of Bonds and Evidence of Insurance</i>	9
2.02 <i>Copies of Documents</i>	9
2.03 <i>Commencement of Contract Times; Notice to Proceed</i>	9
2.04 <i>Starting the Work</i>	9
2.05 <i>Before Starting Construction</i>	9
2.06 <i>Preconstruction Conference</i>	9
2.07 <i>Initial Acceptance of Schedules</i>	9
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE	10
3.01 <i>Intent</i>	10
3.02 <i>Reference Standards</i>	10
3.03 <i>Reporting and Resolving Discrepancies</i>	10
3.04 <i>Amending and Supplementing Contract Documents</i>	11
3.05 <i>Reuse of Documents</i>	11
3.06 <i>Electronic Data</i>	11
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS.....	11
4.01 <i>Availability of Lands</i>	11
4.02 <i>Subsurface and Physical Conditions</i>	12
4.03 <i>Differing Subsurface or Physical Conditions</i>	12
4.04 <i>Underground Facilities</i>	13
4.05 <i>Reference Points</i>	13
4.06 <i>Hazardous Environmental Condition at Site</i>	13
ARTICLE 5 - BONDS AND INSURANCE	14
5.01 <i>Performance, Payment, and Other Bonds</i>	14
5.02 <i>Licensed Sureties and Insurers</i>	15
5.03 <i>Certificates of Insurance</i>	15
5.04 <i>Contractor's Liability Insurance</i>	15
5.05 <i>Owner's Liability Insurance</i>	16
5.06 <i>Property Insurance</i>	16
5.07 <i>Waiver of Rights</i>	17
5.08 <i>Receipt and Application of Insurance Proceeds</i>	17
5.09 <i>Acceptance of Bonds and Insurance; Option to Replace</i>	17
5.10 <i>Partial Utilization, Acknowledgment of Property Insurer</i>	18
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES.....	18
6.01 <i>Supervision and Superintendence</i>	18
6.02 <i>Labor; Working Hours</i>	18
6.03 <i>Services, Materials, and Equipment</i>	18
6.04 <i>Progress Schedule</i>	18
6.05 <i>Substitutes and "Or-Equals"</i>	19
6.06 <i>Concerning Subcontractors, Suppliers, and Others</i>	20
6.07 <i>Patent Fees and Royalties</i>	21
6.08 <i>Permits</i>	21
6.09 <i>Laws and Regulations</i>	21
6.10 <i>Taxes</i>	22
6.11 <i>Use of Site and Other Areas</i>	22
6.12 <i>Record Documents</i>	22
6.13 <i>Safety and Protection</i>	22
6.14 <i>Safety Representative</i>	23
6.15 <i>Hazard Communication Programs</i>	23

6.16	<i>Emergencies</i>	23
6.17	<i>Shop Drawings and Samples</i>	23
6.18	<i>Continuing the Work</i>	24
6.19	<i>Contractor's General Warranty and Guarantee</i>	24
6.20	<i>Indemnification</i>	24
6.21	<i>Delegation of Professional Design Services</i>	25
ARTICLE 7 - OTHER WORK AT THE SITE		25
7.01	<i>Related Work at Site</i>	25
7.02	<i>Coordination</i>	26
7.03	<i>Legal Relationships</i>	26
ARTICLE 8 - OWNER'S RESPONSIBILITIES		26
8.01	<i>Communications to Contractor</i>	26
8.02	<i>Replacement of Engineer</i>	26
8.03	<i>Furnish Data</i>	26
8.04	<i>Pay When Due</i>	26
8.05	<i>Lands and Easements; Reports and Tests</i>	26
8.06	<i>Insurance</i>	26
8.07	<i>Change Orders</i>	26
8.08	<i>Inspections, Tests, and Approvals</i>	26
8.09	<i>Limitations on Owner's Responsibilities</i>	27
8.10	<i>Undisclosed Hazardous Environmental Condition</i>	27
8.11	<i>Evidence of Financial Arrangements</i>	27
ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION.....		27
9.01	<i>Owner's Representative</i>	27
9.02	<i>Visits to Site</i>	27
9.03	<i>Project Representative</i>	27
9.04	<i>Authorized Variations in Work</i>	27
9.05	<i>Rejecting Defective Work</i>	27
9.06	<i>Shop Drawings, Change Orders and Payments</i>	28
9.07	<i>Determinations for Unit Price Work</i>	28
9.08	<i>Decisions on Requirements of Contract Documents and Acceptability of Work</i>	28
9.09	<i>Limitations on Engineer's Authority and Responsibilities</i>	28
ARTICLE 10 - CHANGES IN THE WORK; CLAIMS		28
10.01	<i>Authorized Changes in the Work</i>	28
10.02	<i>Unauthorized Changes in the Work</i>	29
10.03	<i>Execution of Change Orders</i>	29
10.04	<i>Notification to Surety</i>	29
10.05	<i>Claims</i>	29
ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK.....		30
11.01	<i>Cost of the Work</i>	30
11.02	<i>Allowances</i>	31
11.03	<i>Unit Price Work</i>	31
ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES		32
12.01	<i>Change of Contract Price</i>	32
12.02	<i>Change of Contract Times</i>	33
12.03	<i>Delays</i>	33
ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.....		33
13.01	<i>Notice of Defects</i>	33
13.02	<i>Access to Work</i>	33
13.03	<i>Tests and Inspections</i>	33
13.04	<i>Uncovering Work</i>	34
13.05	<i>Owner May Stop the Work</i>	34
13.06	<i>Correction or Removal of Defective Work</i>	34
13.07	<i>Correction Period</i>	34
13.08	<i>Acceptance of Defective Work</i>	35
13.09	<i>Owner May Correct Defective Work</i>	35
ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION		36
14.01	<i>Schedule of Values</i>	36
14.02	<i>Progress Payments</i>	36
14.03	<i>Contractor's Warranty of Title</i>	37
14.04	<i>Substantial Completion</i>	37

14.05	<i>Partial Utilization</i>	38
14.06	<i>Final Inspection</i>	38
14.07	<i>Final Payment</i>	38
14.08	<i>Final Completion Delayed</i>	39
14.09	<i>Waiver of Claims</i>	39
ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION.....		39
15.01	<i>Owner May Suspend Work</i>	39
15.02	<i>Owner May Terminate for Cause</i>	39
15.03	<i>Owner May Terminate For Convenience</i>	40
15.04	<i>Contractor May Stop Work or Terminate</i>	40
ARTICLE 16 - DISPUTE RESOLUTION		41
16.01	<i>Methods and Procedures</i>	41
ARTICLE 17 - MISCELLANEOUS.....		41
17.01	<i>Giving Notice</i>	41
17.02	<i>Computation of Times</i>	41
17.03	<i>Cumulative Remedies</i>	41
17.04	<i>Survival of Obligations</i>	41
17.05	<i>Controlling Law</i>	41
17.06	<i>Headings</i>	41

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times

but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered", "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement

or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or

responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work

(unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's

sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor’s making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

- a. reviewing and checking all such information and data,
- b. locating all Underground Facilities shown or indicated in the Contract Documents,
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will

promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to

entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified

in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection

from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any

deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. Loading Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep

Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall

promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and

Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have

resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall

be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted

by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent

inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial

Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance

with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be

governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

CONTENTS

1.	Definitions	00800-2
2.	Commencement of Contract Time: Notice to Proceed	00800-2
3.	Before Starting Construction	00800-2
4.	Preconstruction Conference	00800-2
5.	Subsurface and Physical Conditions.....	00800-2
6.	Insurance Requirements.....	00800-3
7.	Contractor's Responsibilities	00800-5
8.	Record Documents.....	00800-5
9.	Limitations on ENGINEER'S Responsibilities.....	00800-5
10.	Change of Contract Time.....	00800-5
11.	Payments to CONTRACTOR.....	00800-5
12.	List of Contract Drawings.....	00800-7
13.	Liquidated and Special Damages.....	00800-7
14.	Suspension of Work and Termination	00800-7

SUPPLEMENTARY CONDITIONS

1. Definitions

- A. The definition of "Technical Specifications" shall be the same as the definition for Specifications stated in Paragraph 1.01 under item number 43 of the General Conditions.
- B. Delete Paragraph 1.01.A.12 of the General Conditions in its' entirety.
- C. In Paragraph 1.01A.52 delete the following words, "or responding to differing or unseen subsurface or physical conditions under which the work is to be performed or to emergencies."

2. Commencement of Contract Time: Notice to Proceed

The commencement of Contract Time, as stated in Item 2.03 of the General Conditions is changed to read The Contract Time will commence to run within the sixtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the sixtieth day after the Effective Date of the Agreement.

Notice to Proceed may be given at any time within sixty days after the Effective Date of the Agreement. Refer to the Instructions to Bidders regarding execution of the Contract.

3. Before Starting Construction

In addition to the requirements of Paragraph 2.05 of the General Conditions, "**CONTRACTOR** shall deliver to the **OWNER**, with his signed Contract, all bonds and insurance which he is required to purchase and maintain in accordance with Article 5 of the General Conditions. A copy shall also be submitted to the **ENGINEER**. The **OWNER** shall deliver to the **CONTRACTOR** a copy of all policies of insurance which the **OWNER** is required to purchase and maintain in accordance with Article 5 of the General Conditions."

4. Preconstruction Conference

The time period for holding the preconstruction conference as stated in Paragraph 2.06 of the General Conditions shall be within 30 days after the Effective date of the Agreement, but before the **CONTRACTOR** starts the Work at the site.

5. Subsurface and Physical Conditions

Paragraphs 4.02 and 4.03 shall be deleted in its' entirety and replaced with the following:

DIFFERING SITE CONDITIONS PROVISION:

Execution of this Contract (Agreement) by the Contractor is a representation that the Contractor has visited the site, that general and local conditions are suitable for the work to be performed and that the Contractor accepts all conditions at the Project site. The Contractor assumes all risks with respect to the requirements of the Contract Documents, including without limitation the characteristics (natural and manmade) of the site, site accessibility, labor rates and availability, weather conditions, and any other matter that could affect the performance and cost of the work.

6. Insurance Requirements

- A. Paragraphs 5.05 and 5.06 shall be deleted in their entirety.
- B. Paragraphs 5.07.B, 5.07.B.1 and 5.07.B.2 shall be deleted in their entirety.
- C. In addition to the requirements of Article 5 of the General Conditions, insurance coverage specified herein constitutes the minimum requirements and said requirements shall in no way lessen or limit the liability of the **CONTRACTOR** under the terms of the Contract. The **CONTRACTOR** shall procure and maintain at his own expense any additional kinds and amounts of insurance that, in his own judgment, may be necessary for his proper protection in the prosecution of the Work.
 - 1. The **CONTRACTOR** shall carry insurance as prescribed herein and all policies shall be with companies satisfactory to the **OWNER**. If a part of this Contract is sublet, the **CONTRACTOR** shall require each Subcontractor to carry insurance of the same kinds and in like amounts as carried by the **CONTRACTOR**, including all additional insureds and waivers of subrogation.
 - 2. Certificates of insurance shall state that 30 days written notice will be given to the **OWNER** before the policy is canceled or changed. No **CONTRACTOR** or Subcontractor will be allowed to start any construction work on this Contract until certificates of all insurance required herein and all coverage requirements specified in contract documents are filed with and approved by the **OWNER**. The certificates shall show the type, amount, class of operations covered, effective dates and the dates of expiration of policies.
 - 3. The **CONTRACTOR** shall secure and maintain in effect for the period of the **CONTRACT** and pay all premiums for the following kinds and amounts of insurance:
 - a. Worker's Compensation and Employer's Liability Insurance: This insurance shall protect the **CONTRACTOR** against all claims under applicable State Worker's Compensation Laws. The **CONTRACTOR** shall also be protected and shall cause each Subcontractor to be protected against claims for injury, disease, or death of employees, which for any reason, may not fall within the provisions of a Worker's Compensation Law. The liability limits shall not be less than the required statutory limits for Worker's Compensation and Employer's Liability limits in the amount of ONE MILLION DOLLARS (\$1,000,000.00). **CONTRACTOR** and subcontractors shall supply **OWNER** endorsements from their carriers evidencing waiver of subrogation in favor of the **OWNER**.

-
- b. **CONTRACTOR'S** and Subcontractor's Comprehensive General Liability Insurance, including bodily injury, property damage, contractual and other standard coverage contained in Comprehensive General Liability Insurance, in an amount of not less than ONE MILLION DOLLARS (\$1,000,000) per occurrence and aggregate. **OWNER** shall be provided an endorsement naming the **OWNER** as an insured from the insurer for the work contracted. The Comprehensive General Liability policies carried by both the **CONTRACTOR** and the Subcontractors shall contain an endorsement to include the coverage of the following hazards:
- i. Explosion, collapse, and underground property damage to include any damage or destruction of property below the surface of the ground, such as wires, conduits, pipes, mains, sewers, etc., caused by the **CONTRACTOR'S** operations.
 - ii. The collapse of and structural injury to any building, structure or property on or adjacent to the **OWNER'S** premises or right-of-way caused by the **CONTRACTOR'S** operations in the removal of other buildings, structures, or supports, or by excavation below the surface of the ground.
 - iii. Contractual Liability Coverage for the Hold Harmless segments of the Contract Documents.
- c. **CONTRACTOR'S** Contingent or Protective Liability and Property Damage: In case part of this Contract is sublet, the **CONTRACTOR** shall secure contingent or protective liability and property damage insurance to protect the **CONTRACTOR** from any and all claims arising from the operation of Subcontractors in the execution of Work included in the Contract. In no case shall the amount of such protection be less than the limits of \$500,000/\$1,000,000 for Public Liability Insurance and \$500,000/\$1,000,000 for Property Damage Insurance. The coverage in each case shall be acceptable to the **OWNER**.
- d. Auto Liability: The **CONTRACTOR** shall maintain Auto Liability Insurance in the amount of not less than ONE MILLION DOLLARS (\$1,000,000) Combined Single Limit to protect him from any and all claims arising from the use of the following:
- i. **CONTRACTOR'S** own automobiles and trucks.
 - ii. Hired and non-owned automobiles and trucks.
 - iii. Automobiles and trucks owned by Subcontractors.
- The aforementioned is to cover use of automobiles and trucks on and off the site of the Project. The **OWNER** shall be provided an endorsement from the insurer naming the **OWNER** as an insured for the work contracted.
- e. **OWNER'S** Protective Liability Policy: The **CONTRACTOR** shall maintain **OWNER'S** Protective Liability Insurance with the **OWNER** as the named insured, and the **ENGINEER**, and their servants, agents and employees as additional insureds, in an amount not less than ONE MILLION DOLLARS (\$1,000,000).
- f. Umbrella Liability: The **CONTRACTOR** shall provide **OWNER** a certificate of insurance evidencing Umbrella Liability Insurance in the amount of not less than FIVE MILLION DOLLARS (\$5,000,000).
- g. Builder's Risk and Boiler and Machinery Insurance: NOT USED.

h. Property Insurance: No property insurance is required for this project.

7. Contractor's Responsibilities

Delete Paragraph 6.02.B in its entirety.

8. Record Documents

In addition to the requirements of Paragraph 6.12 of the General Conditions, **CONTRACTOR** shall provide accurate 'mark-ups' acceptable to the **ENGINEER** on or before the date of Substantial Completion of the Project for use by the **ENGINEER** in the preparation of 'record' drawings. Final payment will not be made to the **CONTRACTOR** prior to the **ENGINEER** receiving these mark-ups from the **CONTRACTOR**.

9. Limitations on ENGINEER'S Responsibilities

In addition to the requirements of Paragraph 9.09.B, when it comes to his attention, the **ENGINEER** will immediately notify the **OWNER** in the event that the **CONTRACTOR** is not complying with the Contract Documents or is conducting the Work in such a manner that could be considered grounds for termination of the Contract. The **CONTRACTOR** shall retain responsibility for performing all Work in compliance with the Contract Documents.

The following language shall be added to Paragraph 9.09.B:

“Consistent with the express provisions of this Section 00700, Article 6.13, Article 6.17.D.2, Article 9.02.B, Article 9.09, this Article 9.09.B, and Article 14.02.B.4.b, any reference to “safety” elsewhere in this contract, including but not limited to those found in Section 00700, Articles 4.02.B.1, 4.04.A.2.d, 4.04.B.1, 4.06.B.1, 6.02.B, 6.14, 6.15, 6.16, 6.17.C.1.c, and 13.02.A, does not impose upon the Engineer any duty, obligation or other contractual undertaking to administer the “safety” aspects of Contractor’s performance, or any other matter relating to the Contractor’s means, methods, techniques, sequences or procedures. Contractor’s contractual safety obligations and means and methods during construction are the sole responsibility of the Contractor and are not being administered, overseen or reviewed in any way by the Engineer in performing its contractual obligations”

10. Change of the Contract Time

In addition to the requirements of Paragraph 12.03 of the General Conditions, rainstorms which are encountered in the project area on a regular and seasonal basis do not constitute an abnormal weather condition.

11. Payments to **CONTRACTOR**

Paragraph 14.02, Application for Payments, is deleted in its' entirety and the following substituted therefore:

A. Monthly Estimates and Partial Payments: The **CONTRACTOR'S** partial payment period shall end on the last day of each month. The **CONTRACTOR** shall submit acceptable

Application for Payment to the **ENGINEER** by the date indicated on the payment schedule as supplied to **CONTRACTOR** by **ENGINEER** provided that the amount due on completed work is at least \$500.00. The partial payment request shall be filled out and signed by the **CONTRACTOR** covering the work completed as of the date of the request and accompanied by such supporting documentation as is required by the Contract Documents and also as the **ENGINEER** may reasonably require. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include in any monthly estimate advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site, the Application for Payment shall also be accompanied by such data, satisfactory to **OWNER**, as will establish **OWNER'S** title to the material and equipment and protect **OWNER'S** title to the material and equipment and protect **OWNER'S** interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of **CONTRACTOR** stating that all previous progress payments received on account of the Work have been applied to discharge in full all of **CONTRACTOR'S** obligations reflected in prior Applications for Payment.

- B. After each monthly estimate has been approved, the **OWNER** shall pay to the **CONTRACTOR** 95 percent of the amount of said estimate. From the total value of each estimate there will be deducted an amount equivalent to 5 percent of the whole as a retainage to be held by the **OWNER**. The monthly estimates will be approximate only and subject to correction in any subsequent estimate rendered following discovery of the error. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include any monthly advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work.
- C. Subsequent to discovery of any defective or questionable work, an amount equal to the estimated value of such work will be deducted from the next current estimate. The sum will not be included in a subsequent estimate until the defects have been remedied to the **ENGINEER'S** satisfaction.
- D. The **OWNER** reserves the right to withhold payment of any monthly estimate that becomes due if, in the opinion of the **OWNER'S** Attorney, such action is warranted because of any breach of the Contract Provisions or malfeasance on the part of the **CONTRACTOR** or because the progress or the quality of the work is unsatisfactory and does not comply with the Plans and Specifications.

Paragraph 14.02.C of the General Conditions is modified to read “60 days after presentation of the Application for Payment to **OWNER** with **ENGINEER’S** recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by **OWNER** to **CONTRACTOR**.”

Paragraph 14.07.C of the General Conditions is modified to read, "If the Application and accompanying documentation are appropriate as to form and substance, **OWNER** shall, within 60 days after receipt thereof, pay **CONTRACTOR** the amount recommended by **ENGINEER**."

Delete Paragraph 14.09.A.2 in its entirety.

12. List of Contract Drawings: Not Used.

13. Liquidated and Special Damages

The **CONTRACTOR** will be subject to liquidated damages in the amount of **\$250** per calendar day that work is not complete after the Final Completion Date.

14. Suspension of Work and Termination

In Paragraph 15.04.A delete the following words: “or Engineer fails to act on any Application for Payment within thirty days, after it is submitted” and add the words “if the”. In Paragraph 15.04.B delete the following words: “if Engineer has failed to act on an Application for Payment within thirty days after it is submitted” and add the words “if the”.

*** * END OF SECTION * ***

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 Location of Work

All of the work of this Contract is located in public right-of-way or on easements and property owned or obtained by the Owner.

1.02 Work to be Done

- A. The CONTRACTOR shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings.
- B. The CONTRACTOR shall perform the work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration required as a result of damages caused during this construction.
- C. All materials, equipment, skills, tools and labor which are reasonably and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the CONTRACTOR without additional compensation, whether specifically indicated in the Contract Documents or not.
- D. The CONTRACTOR shall comply with all county, state, federal, and other codes which are applicable to the proposed construction work.

1.03 General Description of Work to be Performed

- A. The Work included in the Contract shall be as described in the Contract Documents.
- B. All work shall be done as described in the Specifications and as shown on the Drawings, complete, tested and ready for operation.

1.04 Work Sequence

- A. All work to be done under the Contract shall be done with minimum inconvenience to the OWNER. The CONTRACTOR shall coordinate his work with private property owners such that existing drainage, water service, sewer service and garbage pickup and other public services are maintained at all times.
- B. Construct Work in stages to accommodate the OWNER'S use of the premises during the construction period; coordinate the construction schedule and operations with the ENGINEER.
- C. Construct the Work in stages to provide for public convenience. Do not close off public

access until completion of one stage of construction will provide alternative usage.

1.05 Construction Areas

- A. CONTRACTOR shall limit his use of the construction areas for Work and for storage, to allow for:
 - 1. Work by other contractors.
 - 2. OWNER use.
 - 3. Public use.
- B. Coordinate use of work site under direction of ENGINEER.
- C. Assume full responsibility for the protection, security and safekeeping of products under this Contract stored on the site.
- D. Move any stored products, under CONTRACTOR'S control which interfere with operations of the OWNER or other contractors.
- E. Obtain and pay for the use of additional storage or work areas needed for operations.

1.06 Owner Occupancy

- A. OWNER will have full access to and use of all existing sewer facilities during the entire period of construction for the conduct of his normal operations. Cooperate with ENGINEER in all construction operations to minimize conflict and to facilitate OWNER usage.
- B. CONTRACTOR shall at all times conduct his operations as to insure the least inconvenience to the general public.

1.07 Partial Owner Occupancy

The CONTRACTOR shall schedule his operations for completion of portions of the Work, as designated, for the OWNER'S occupancy prior to Substantial Completion of the entire Work.

1.08 Plans and Specifications

- A. Specifications: The Technical Specifications consist of three parts: General, Products, and Execution. The General section contains general requirements which govern the work. The Products and Execution sections modify and supplement these by detailed requirements of the work and shall always govern whenever there appears to be a conflict.
- B. Intent:
 - 1. All work called for in the Specifications applicable to the Contract but not shown on the Plans in their present form or vice versa shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the work is required and shall be performed by the CONTRACTOR as though it were specifically delineated or described at the CONTRACTOR'S expense.
 - 2. The apparent silence of the Specifications as to any detail, or the apparent omission

from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.

- C. Conflict between Drawings and Specifications. Where an obvious conflict exists between the Plans and Specifications, the ENGINEER shall decide which governs and the CONTRACTOR shall comply with the decision. Such decision shall not be grounds for additional payment to the CONTRACTOR, i.e., the CONTRACTOR shall include the price of the most expensive alternative in his bid.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 Description

- A. CONTRACTOR shall furnish all labor, materials, tools, equipment, appurtenances and all services necessary to perform all Work required, at the lump sum or unit prices for the items listed in the Prices Bid Table located in the Bid Proposal.
- B. The pay items listed in the Bid Proposal constitute all of the pay items for the completion of the Contract. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant, services, CONTRACTOR'S or ENGINEER'S field offices, layout surveys, job signs, sanitary requirements, testing, safety devices, approval and record drawings, water supplies, power, removal of waste, watchmen, bonds, insurance, and all other requirements of the Contract Documents. Compensation for all such services, things and materials shall be included in the prices stipulated for the lump sum and unit pay items listed herein.

1.02 Engineer's Estimate of Quantities

The ENGINEER's estimated quantities for unit bid prices, as listed in the Bid Form, are approximate only and are included solely for the purpose of comparison of Bids. The OWNER does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond therewith and reserves the right to increase or decrease any quantity or to eliminate any quantity as OWNER may deem necessary.

1.03 Related Provisions Specified Elsewhere

- A. Payments to CONTRACTOR: Refer to General Conditions and Supplemental Conditions.
- B. Changes in Contract Price: General Conditions and Contract Forms.
- C. Schedule of Values: Section 01026.

1.04 Measurement of Quantities

- A. The measurement and determination of quantities for each pay item will be made in general as prescribed hereinafter and specifically as set out under Method of Measurement and Basis of Payment for each respective pay item section. Actual authorized quantities of work, complete and accepted under the contract, will be measured by the Engineer according to United States standard measures, and in accordance with well recognized engineering practices.
- B. A station when used as a definition or term of measurement will be 100 linear feet.

-
- C. Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures having an area of nine square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered by the Engineer.
 - D. Where the area unit for measurement and payment is specified for erosion control items, the measurements will be taken on the slope of the ground to compute the actual surface area for payment.
 - E. Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
 - F. All items which are measured by the linear foot, such as pipe culverts, guardrail, underdrains, etc., will be measured as specified under the Method of Measurement for the item unless otherwise shown on the plans.
 - G. No payment will be made for unauthorized excavation. Excavation or embankment performed beyond the required neat lines or slope stakes will not be measured for payment unless within tolerances specified or otherwise provided.
 - H. In computing volumes of excavation and embankment, the average end area method will be used, unless otherwise specified.
 - I. When size number is used in the measurement of wire, it will mean the size number specified in AASHTO Designation: M 32.
 - J. The term ton will mean the short ton consisting of 2000 pounds avoirdupois. All materials which are specified for measurement by the ton shall be weighed by competent personnel on approved scales set at locations approved by the Engineer or in the case of prepackaged materials, the manufacturer's bag weight may be used. If material is shipped by rail, the car weight may be accepted provided it is the actual weight of material and not minimum car weight used for assessing freight tariff. However, car weights will not be acceptable for material to be used in mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such time as the Engineer directs, and each truck shall bear a plainly legible identification mark.
 - K. When a complete structure or structural unit, in effect "lump sum" work, is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.
 - L. Volumes of materials computed in cubic yards by the average end area method are designated as "Final Measure" (FM), or "Final Measure - Embankment" (FME). Volumes of materials designated for measurement loose in the vehicle are designated as "Loose Vehicle Measure" (LVM).

-
- M. Volumetric measurement of excavation, embankment, granular materials or similar materials in cubic yards will be made by the methods designated on the plans or in the proposal. For justifiable reasons, such as impracticability of measurement of volumes (usually small) by the designated method, the Engineer may order measurement by another method as follows:
1. Volumes designated for payment by FM may be measured LVM and converted to contract measurement by multiplying the loose measure by 80 percent.
 2. Volumes designated for payment by LVM may be measured in its original position by the average end area method and multiply the FM measure by 125 percent.
 3. Volumes designated for payment by FME may be measured in its original position by the average end area method and multiply the FM measure by 90 percent.
 4. Small volumes of surplus, excess excavation or other small volumes of excavation which are impractical to measure by the average end area method but are designated to be measured by FME may be measured LVM and multiply the loose measure by 72 percent.

When the Engineer orders the use of a conversion factor for converting a unit of measure, the ordered method of measurement shall be deemed acceptable to all parties and shall be final.

- N. When requested by the Contractor and with written approval of the Engineer, material specified to be measured by the cubic yard or ton may be converted to the other measure as appropriate. Factors for this conversion will be determined by the Engineer and agreed to by the Contractor before such method of measurement is used.
- O. All materials measured by the cubic yard LVM shall be hauled in approved vehicles and verified at the point of delivery. Vehicles may be of any size or type acceptable to the Engineer provided the body is of such shape that the capacity may be readily and accurately determined to the whole cubic yard. Unless all vehicles on the work are of uniform capacity, each vehicle must be plainly labeled to indicate its measured capacity. All vehicles shall be legibly numbered for identification.
- P. The vehicles shall be loaded to ensure a water level load when they arrive at the point of delivery. Loads hauled in unapproved vehicles and loads of a quantity less than the measured quantity for the hauling vehicle, will be subject to rejection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01026
SCHEDULE OF VALUES

PART 1 GENERAL

1.01 Requirements Included

The Schedule of Values is an itemized list that establishes the value or cost of each part of the work as defined in Section 01025, Part 1.04. All other work shall be paid according to the Prices Bid Table. It shall be used as the basis for preparing progress payments and may be used as a basis for negotiations concerning additional work or credits which may arise during the construction. Quantities and unit prices may be included in the schedule when approved by or required by the ENGINEER.

1.02 Preparation

- A. Schedule shall show breakdown of labor, materials equipment and other costs used in preparation of the Bid.
- B. Costs shall be in sufficient detail to indicate separate amounts for each Section of the Specifications.
- C. CONTRACTOR may include items for bond, insurance, temporary facilities and job mobilization within the mobilization bid item.
- D. Schedule of Values shall be prepared on 8-1/2 inch by 11 inch white paper.
- E. Use Table of Contents of the Specifications as basis for Schedule format and identify each item with number and title in the Table of Contents. List sub-items of major products or systems as appropriate or when requested by ENGINEER.
- F. When requested by ENGINEER, support values with data that will substantiate their correctness.
- G. The sum of the individual values shown on the Schedule of Values must equal the total Contract Price.
- H. The manner in which overhead and profit are shown shall be supported by the ENGINEER.
- I. Schedule shall show the purchase and delivery costs for materials and equipment that the CONTRACTOR anticipates he shall request payment for prior to their installation.

1.03 Submittal

Submit two copies of Schedule to ENGINEER for approval at least 20 days prior to submitting first application for a progress payment. After review by ENGINEER, revise and resubmit Schedule as required until it is approved.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 Requirements Included

Submit Applications for Payment to the ENGINEER in accordance with the General Conditions and in the form required by the OWNER.

1.02 Format and Data Required

- A. Submit applications typed with itemized Schedule of Values data typed on 8-1/2 inch x 11 inch white continuation sheets.
- B. Provide detailed substantiating data on additional sheets, including paid invoices where applicable.

1.03 Preparation of Application for Progress Payments

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
 - 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
 - 3. Execute certification with signature of a responsible officer of the CONTRACTOR.
- B. Continuation Sheets:
 - 1. Fill in total list of all scheduled component items of work, with item number and scheduled dollar value for each item.
 - 2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored. Round off values to the nearest dollar or as specified for Schedule of Values.
 - 3. List each Change Order executed prior to date of submission by Change Order Number and description.
 - 4. To receive payment for materials stored on site, submit copies of the original paid invoices with the application for payment.

1.04 Substantiating Data for Progress Payments

- A. Provide substantiating data containing suitable information for review of costs requested with the applications for progress reports identifying:
 - 1. The payment item to which the substantiating data applies.
 - 2. Application number and date.
 - 3. Detailed list of enclosures.
 - 4. For stored materials:
 - a. Item number and identification as shown on application.

-
- b. Description of specific material and invoice of delivered material.
 - c. Consolidated inventory of stored materials showing:
 - (1) Materials received.
 - (2) Materials used.
 - d. Additional stored materials may not be claimed upon reaching 75% completion of the total project.
 - e. Stored Materials shall be inventoried jointly prior to each pay request.
- B. Submit one copy of data for each copy of application for payment.
- C. The CONTRACTOR is to maintain an updated set of record drawings in accordance with Section 01720. As a prerequisite for monthly progress payments, the CONTRACTOR is to exhibit the updated record drawings for review by the OWNER and the ENGINEER.
- D. Construction photographs as required by Section 01380 will be submitted with each progress payment and shall be considered a part of that payment request.
- E. Updated construction schedule showing work completed and work projected by month to the completion of the project.

1.05 Preparation of Application for Final Payment

- A. Fill in application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting.

1.06 Submittal Procedure

- A. Submit applications for payment to the ENGINEER at the times stipulated in the General Conditions.
- B. Initially a pencil draft application shall be informally submitted to the ENGINEER who shall review the draft with the CONTRACTOR and make adjustments as appropriate. The CONTRACTOR shall then prepare a formal typed application using the informally approved amounts and submit three (3) complete sets to the ENGINEER.
- C. When the ENGINEER finds the application properly completed and correct, as informally approved, he will transmit it to the OWNER for payment with a copy to the CONTRACTOR.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01030

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 WORKMANSHIP, MATERIAL AND EQUIPMENT

- A. When a particular product is specified or called for, it is intended and shall be understood that the Contractor include those products in his bid. Should the Contractor desire to substitute products which he purports to be equal to those specified, the Contractor shall furnish information as described in Section 00700, General Conditions, The alternative products(s) submitted by the Contractor shall meet the requirements of the specifications and shall, in all respects, be equal to the products specified by name herein.
- B. All apparatus, mechanism, equipment, machinery, and manufactured articles for incorporation into the Work shall be new and unused and the standard products of recognized reputable manufacturers.

1.02 PROVISIONS FOR CONTROL OF EROSION AND POLLUTANTS

Sufficient precautions shall be taken during construction to minimize the runoff of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other materials harmful to humans, fish, or other life, into the ground and surface waters of the state. Contractor will give all notices and comply with all laws, notices, ordinances, rules and regulations applicable to the work, without exception.

1.03 ON-SITE STORAGE

The Contractor's attention is invited to special storage requirements and possible charges for noncompliance of on-site storage requirements for materials and equipment as specified in Section 01600.

1.04 INCLEMENT WEATHER

- A. In the event of inclement weather, or whenever Engineer shall direct, Contractor and Subcontractors will protect carefully the work and materials against damage or injury from the weathers, including sudden rises in flows due to storms outside the immediate construction zone. Damaged Work and materials shall be removed and replaced. If, in the opinion of Engineer, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or Subcontractors to so protect the Work, no additional time for removal and replacement will be given by the Owner.

1.05 WARRANTIES

- A. All work supplied under the Contract shall be warranted for a period of one (1) year or such longer period of time as may be prescribed by any special guarantee required by Change Orders or issued by Subcontractor, suppliers, or manufacturers, from the date of acceptance for operations (beneficial use) by the Owner as specified in Section 01740, Warranties and Bonds.
- B. The work shall be warranted to be free from defects in workmanship, design and materials. If any part of the work should fail during warranty period, it shall be replaced or restored to service at no expense to the Owner.

1.06 CONSTRUCTION CONDITIONS

The Contractor shall strictly adhere to the specific requirements of the governmental units(s) or agency(ices) having jurisdiction over the work. Wherever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.

1.07 PUBLIC NUISANCE

The Contractor shall not create a public nuisance, including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, or excessive noise.

1.08 SUSPENSION OF WORK DUE TO WEATHER

During inclement weather, all work which might be damaged or rendered inferior by such weather conditions shall be suspended. The orders and decisions of the Engineer as to suspensions shall be final and binding. The authority of the Engineer to issue such an order shall not be interpreted as a requirement to do so. During suspension of the work from any cause, the work shall be suitably covered and protected so as to preserve it from injury by the weather. Notwithstanding this provision, it is understood and agreed that the General Conditions shall control.

1.09 RELOCATIONS

The Contractor shall be responsible for the relocation of structures, including, but not limited to, light poles, signs, sign poles, fences, mailboxes, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid.

1.10 SALVAGE

Any existing equipment or materials, including, but not limited to, valves, pipes, fittings, couplings, etc., which are removed or replaced as a result of construction under this project may be designated as salvage by the Engineer and, if so, shall be removed and delivered to the Owner at a location directed by the Engineer.

1.11 PERMITS

Upon notice of award, the Contractor shall immediately apply for all applicable permits not previously obtained by the Owner to do the work from the appropriate governmental agency or agencies. No work shall commence until all applicable permits have been obtained and copies delivered to the Engineer. The costs for obtaining all permits shall be borne by the Contractor.

1.12 HAZARDOUS LOCATION

- A. The existing wet wells, manholes, sewers, force mains, pipes, and other related areas are hazardous locations in that explosive concentrations of sewage gas may be present. The Contractor is cautioned that the above areas, especially the wet well, may be deficient in oxygen. Checks shall be made by the Contractor whenever personnel are working in these areas to insure that adequate ventilation has been provided.
- B. In his operations in hazardous locations, the Contractor shall use spark-proof tools and explosion-proof temporary lighting and shall not use electric power tools, open flame devices, electric welding or any device or methods which might conceivably cause ignition or explosion.
- C. If a working is atmosphere is unsafe, the Contractor shall furnish, install, operate, and later remove such temporary auxiliary ventilating facilities as are necessary to provide a safe atmosphere.
- D. The Contractor shall also instruct and caution his employees and the employees of his subcontractors to avoid smoking while in the hazardous areas. Suitable prominent "No Smoking" signs shall be placed at locations where sewage gas could be present.

1.13 NOTIFICATION OF WORK ON EXISTING FACILITIES

Before commencing work on any of the existing structures or equipment, the Contractor shall notify the Engineer, in writing, at least ten (10) calendar days in advance of the date he proposes to commence such work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01041

PROJECT COORDINATION

PART 1 GENERAL

1.01 Work Progress

The CONTRACTOR shall furnish personnel and equipment which will be efficient, appropriate, and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the contract. If at any time such personnel appear to the ENGINEER to be inefficient, inappropriate, or insufficient for performing the quality of work required or for producing the rate of progress aforesaid, he may order the CONTRACTOR to increase the efficiency, change the character or increase the personnel and equipment, and the CONTRACTOR shall conform to such order at his own expense. Failure of the ENGINEER to give such order shall in no way relieve the CONTRACTOR of his obligations to perform the work at the specified quality and rate of progress.

1.02 Private Land

The CONTRACTOR shall not enter or occupy private land outside of the OWNER'S land, right-of-ways, or servitudes except by written permission of both the OWNER and the Owner of the private land. Such permission shall be obtained by and at the expense of the CONTRACTOR and at no additional cost to the OWNER.

1.03 Work Locations

Work shall be located substantially as indicated on the Drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons.

1.04 Open Excavations

All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The CONTRACTOR shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by the public, OWNER'S and ENGINEER'S personnel, and workmen.

1.05 Test Pits

Test pits for the purpose of locating underground utilities or structures which may interfere with installation of the Work shall be excavated in advance of the Work and backfilled by the CONTRACTOR. Test pits shall be backfilled immediately after their purpose has been satisfied and maintained in a manner satisfactory to the ENGINEER. The costs for such test pits shall be included in the cost of the work for which the test pits benefit.

1.06 Water for Construction Purposes

- A. In locations where public water supply is available, the CONTRACTOR shall purchase water for all construction purposes.
- B. The CONTRACTOR shall make his own arrangements and pay all costs for connections to public water systems and for water used. Existing OWNER supplies or connections shall not be used without prior approval by OWNER.

1.07 Maintenance of Flow

The CONTRACTOR shall maintain the flow of sewers, drains, and water courses interrupted during the progress of the Work, including complete pumped bypass systems where necessary. The CONTRACTOR shall immediately remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the ENGINEER well in advance of the interruption of any flow. All temporary works installed for flow maintenance shall be removed when the permanent work is finished and the areas cleaned and restored to good condition.

1.08 Protection of Construction and Equipment

- A. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed. All portions of the work injured shall be reconstructed by the CONTRACTOR at his own expense.
- B. All structures shall be protected in a suitable manner. Should any parts of the structures become heaved, cracked or otherwise damaged, all such damaged portions of the work shall be completely repaired and made good by the CONTRACTOR at his own expense and to the satisfaction of the ENGINEER. If, in the final inspection of the work, any defects, faults or omissions are found, the CONTRACTOR shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the CONTRACTOR shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein for at least the guarantee period described in the contract.
- C. The CONTRACTOR shall take all necessary precautions to prevent damage to any structure due to water pressure (groundwater or surface water) during and after construction and until such structure is accepted and taken over by the OWNER.
- D. The CONTRACTOR is responsible for security of the site. Security of all equipment, material, tools, machinery, supplies, structures, buildings, vehicles and offices is the responsibility of the CONTRACTOR. Measures to affect job site security and limit unauthorized access, including temporary fencing, security guards, and other measures are the responsibility of the CONTRACTOR at his expense.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01041.1

UTILITIES COORDINATION

PART 1 GENERAL

1.01 UTILITIES

Utilities for the purpose of these specifications shall be considered as including, but not limited to: pipelines, conduits, cables, transmission lines and appurtenances of Public Utilities and those of Special Utility Districts, Cities or Towns, businesses or individuals solely for their own use or for use of their tenants; and storm drains, sanitary sewers, street lighting, traffic signal and fire alarm systems.

1.02 UNDERGROUND INSTALLATIONS

Existing underground pipelines and utilities are indicated on the Drawings only to the extent such information was made available to or discovered by Engineer in preparing drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed by the Owner and the Engineer.

1.03 UTILITIES LOCATED IN CITY RIGHT-OF-WAY

Unless otherwise provided or excepted herein, the removal, adjusting, relocation, or replacement of utility structures or facilities within City right-of-way which may be necessary for construction of the work in accordance with these Contract Documents, shall be at the expense of the Contractor.

It shall be the Contractor's responsibility to protect and maintain those utilities which, in the opinion of the Engineer, do not need to be disturbed in order to accomplish the work required by the contract.

1.04 RELOCATIONS OF EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES, CABLE TV LINES AND WATER LINES

The Contractor shall notify the proper authority of the utility involved when relocation of these lines is required. The Contractor shall coordinate all work by the utility so that the progress of construction will not be hampered.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

The Contractor, when the Notice to Proceed is received, shall notify the owners of utilities affected by the work, the approximate date upon which he will begin work, and shall submit a progress schedule of the proposed work. This shall be deemed sufficient notice if the project progresses

according to the progress schedule submitted with the notification. If changes in the schedule of the work occur, the Contractor shall appraise both the owner of the utility affected and the Engineer so that adjustments in the work schedule of utility can be made. The Contractor shall be responsible for damages to the utility facility and construction delays resulting from failure to notify the utility and the Engineer of changes in procedure or location.

3.02 PROTECTION OF EXISTING UTILITIES

- A. The attention of the Contractor is drawn to the fact that during excavation, the possibility exists of the Contractor encountering various water, gas, telephone, electrical, or other utility lines not shown on the Drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the Owner.
- B. The Contractor shall assume full responsibility for the protection of all utilities, public and private, including poles, services to buildings, gas pipes, water pipes, hydrants, sewers, drains, and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such utilities from injury of any kind. Any damage resulting from the Contractor's operation shall be repaired by him at his expense.

The protection and preservation of utility facilities which are located within the right-of-way, but outside the normal limits of construction, as determined by the Engineer, shall be the responsibility of the Contractor. The Contractor shall be responsible for all damage to utilities which are due to his negligence.

- C. The Contractor shall bear full responsibility for obtaining locations of all underground structures and utilities (including existing water services, drain lines, and sewer). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- D. If, in the opinion of the Engineer, permanent relocation of a utility owned by the City is required, he may direct the Contractor, in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work under Article 10 of the General Conditions. If relocation of a privately owned utility is required, the Contractor will notify the Utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the County and Utility and shall have no claim for delay due to such relocation.
- E. The Contractor shall notify public and private utility companies in writing at least two, but not more than five full days (excluding Saturdays, Sundays, and legal holidays) before excavating near their utilities.

3.03 UTILITIES TO BE ADJUSTED

The owners of utility facilities which require relocation, removal, adjustment or replacement shall, if possible and feasible, perform this work prior to the commencement of the Contractor's work. Where utility work must be done in conjunction with the Contractor's work on the project or in conjunction

with the work of other utilities, arrangements for when, how and where the operation is to proceed shall be worked out among the parties concerned. If disputes arise, the Engineer shall decide the course of action to be taken.

3.04 UTILITIES CONFLICTING WITH OPERATIONS

Those utility facilities which do not conflict with the improvement, but which are obstructions to the operations required for installation or which are obstructions to the operations required for installation of which present unusual difficulty due to their close proximity to the area of the operations, shall be located with certainty by the owners of the utility prior to the arrival of the Contractor's operation which would be hindered by the utility facility. The Contractor is required to preserve the utility facility in place without damage and shall be responsible for damages sustained, if the utility owner has located the facility by exposing it to the view of the Contractor or has otherwise made the Contractor aware, with certainty, of the location of the facility. Any other arrangements that the Contractor may make with a utility owner as a substitute for the requirements of this Section shall require the approval of the Engineer, in writing.

3.05 MISLOCATED UTILITIES

The owner of a utility shall be wholly responsible for the proper location of his facilities which are affected by construction work performed according to these specifications. Improperly located or mislocated facilities which are damaged during construction shall be the responsibility of the utility, providing proper notification has been given.

*** * END OF SECTION * ***

SECTION 01045
CUTTING AND PATCHING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Contractor shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the Work to include:

- A. Make its several parts fit together properly.
- B. Uncover portions of the Work to provide for installation of ill-timed work.
- C. Remove and replace defective work.
- D. Remove and replace work not conforming to requirements of the Contract Documents
- E. Remove samples of installed work as specified for testing.

1.02 SUBMITTALS

- A. Submit a written request to the Engineer well in advance of executing any cutting or alteration which affects:
 - 1. Work of the Owner or any separate contractor.
 - 2. Structural value or integrity of any element of the Project or work.
 - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 4. Efficiency, operational life, maintenance or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- B. Request shall include:
 - 1. Identification of the work.
 - 2. Description of affected work.
 - 3. The necessity for cutting, alteration or excavation.
 - 4. Effect on work of Owner or any separate Contractor, or on structural or weatherproof integrity of work.

-
5. Description of proposed work:
 - a. Scope of cutting, patching, alteration, or excavation.
 - b. Trades who will execute the work.
 - c. Products proposed to be used.
 - d. Extent of refinishing to be done.
 6. Alternatives to cutting and patching.
 7. Cost proposal, when applicable.
- C. Submit written notice to the Engineer designating the date and the time the work will be uncovered.

PART 2 PRODUCTS

2.01 MATERIALS

Comply with specifications and standards for each specific product involved.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions affecting installation of products or performance or work.
- C. Report unsatisfactory or questionable conditions to the Engineer in writing; do not proceed with work until the Engineer has provided further instructions.

3.02 PREPARATION

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of Work.
- B. Provide devices and methods to protect other portions of Project from damage.
- C. Provide protection from elements for the portion of the Project which may be exposed by cutting and patching work, and maintain excavations free from water.

3.03 PERFORMANCE

- A. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.
- C. Employ original installer or fabricator to perform cutting and patching for:
 - 1. Weather-exposed or moisture-resistant elements.
 - 2. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- E. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of Contract Documents.
- F. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

*** * END OF SECTION * ***

SECTION 01050

FIELD ENGINEERING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall provide and pay for field engineering services for:
 - 1. Survey work required in execution of work.
 - 2. Civil, structural, or other professional engineering services specified or required to execute the Contractor's construction method.
- B. The method of field staking for the construction of the work shall be at the option of the Contractor. The Owner shall provide the engineering surveys to establish reference points which in his judgment are necessary to enable the Contractor to proceed with his work.
- C. The accuracy of any method of staking shall be responsibility of the Contractor. All engineering for vertical and horizontal control shall be the responsibility of the Contractor.
- D. The Contractor shall be held responsible for the preservation of all stakes and marks. If any stakes or marks are carelessly or willfully disturbed by the Contractor, the Contractor shall not proceed with any work until he has reestablished such points, marks, lines and elevations as may be necessary for the prosecution of the work.
- E. The Contractor shall retain the services of a competent surveyor, registered in the State of Mississippi, to layout the work and maintain a survey during construction. The Contractor shall be solely responsible for proper location of the work.

1.02 SURVEY REFERENCE POINTS

Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.

- 1. Make no changes or relocations without prior written notice to the Engineer.
- 2. Report to the Engineer when any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.

1.03 PROJECT SURVEY REQUIREMENTS

- A. Establish temporary bench marks as needed, referenced to data established by survey control points. Record locations, with horizontal and vertical data, on Record Drawings.
- B. Establish lines and levels, and locate and lay out, by instrumentation and similar appropriate

means:

1. Site improvements, including utility slopes and invert elevations.
 2. Batter boards for structures.
- C. From time to time, verify layouts by same methods.
- D. Establish all lines and grades prior to construction of site improvements.

1.04 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.
- B. At Contract closeout, submit a survey of installation of water mains, fire hydrants, and valves at the same scale as the Engineer's drawings indicating elevations and channel stationing at 100 foot increments.

1.05 SUBMITTALS

- A. On request of the Engineer, submit documentation to verify accuracy of field engineering work.
- B. Submit Drawings showing locations of all pipes and structures constructed. This Drawing shall be included with the Record Drawings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION(NOT USED)

*** * END OF SECTION * ***

SECTION 01060

REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Abbreviations and acronyms used in Contract Documents to identify reference standards are as indicated herein.

1.02 QUALITY ASSURANCE

- A. Applications: When a standard is specified by references, comply with requirements and recommendations stated in the standard, except when requirements are modified by the Contract Documents, or applicable codes establish stricter standards.
- B. Publications Date: The publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

1.03 ABBREVIATIONS, NAMES, AND ADDRESSES OF ORGANIZATIONS

The following standards may be referenced in the Contract Documents. The contractor shall obtain copies of reference standards directly from the publication source when needed for proper performance of Work or when required for submittal by Contract Documents.

AAN	American Association for Nurserymen 1250 I Street N.W., Suite 500 Washington, DC 20005 (202) 789-2900
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W., Suite 225 Washington, DC 20001 (202) 624-5800
ACI	American Concrete Institute Post Office Box 19150 22400 W. Steven Mile Road Detroit, MI 48219 (313) 532-2600
ACPA	American Concrete Pipe Association 8320 Old Courthouse Road, Suite 201 Vienna, VA 22180 (703) 821-1990
AI	Asphalt Institute

	Asphalt Institute Building College Park, MD 20740-1802
AISC	American Institute of Steel Construction 400 North Michigan Avenue Chicago, IL 60611 (312) 670-2400
AISI	American Iron and Steel Institute 1133 15th Street N.W., Suite 300 Washington, DC 20005 (202) 452-7100
ANSI	American National Standard Institute 1430 Broadway New York, NY 10018 (212) 354-3300
ASCE	American Society of Civil Engineers 345 East 47th Street New York, NY 10017 1-800-548-ASCE 345 East 47th Street New York, NY 10017 (212) 705-7722
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103 (215) 299-5400
AWPA	American Wood Preserver's Association Post Office Box 849 Stevensville, MD 21666 (301) 643-4163
AWS	American Welding Society Post Office Box 351040 550 LeJeune Road, N.W. Miami, FL 33126 1-800-443-9353
AWWA	American Water Works Association 6666 W. Quincy Avenue Denver, CO 80235 (303) 794-7711
CLFMI	Chain Link Fence Manufacturers Institute

	1776 Mass Avenue N.W., Suite 500 Washington, DC 20036 (202) 659-3537
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Road Schaumburg, IL 60173 (312) 517-1200
DIPRA	Ductile Iron Pipe Research Association 245 Rivercase Parkway E., Suite 100 Birmingham, AL 35244 (205) 988-9870
FS	Federal Specification General Services Administration Specifications and Consumer Information & Distribution Section (WFSIS) 7 and D Street S.W., Room 654 Washington, DC 20407 (202) 472-2140
IEEE	Institute of Electrical and Electronic Engineers Service Center 345 E. 47th Street New York, NY 10017 (212) 705-7900
MDOT	Mississippi Department of Transportation P. O. Box 1850 Jackson, Ms 39215-1850 (601) 359-1213
MIL	Department of the Navy Navel Publications and Forms Center 5801 Torbor Avenue Philadelphia, PA 19120-5099 (215) 697-2667
NEC	National Electric Code National Fire Protection Association Batterymarch Park Quincy, MA 02269 (617) 770-3000
NEMA	National Electrical Manufacturer's Association 2101 L Street, NW, Suite 300 Washington, DC 20037 (202) 457-8400
NSPE	National Society of Professional Engineers

	1420 King Street Alexandria, VA 22314 (703) 684-2835
OSCI	Office of Standards Code and Information National Bureau of Standards Gaithersburg, MD 20899 (301) 975-4029
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077 (312) 966-6200
PCI	Prestressed Concrete Institute 175 W. Jackson Blvd., Suite 1859 Chicago, IL 60604 (312) 786-0300
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association Post Office Box 70 Merrifield, VA 22116 (703) 790-9890
SSPC	Steel Structures Painting Council 4400 5th Avenue Pittsburgh, PA 15213 (412) 268-3327
UL	Underwriter's Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062 (312) 272-8800

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01200
PROJECT MEETINGS

PART 1 GENERAL

1.01 Requirements Included

- A. The ENGINEER shall schedule and administer a preconstruction meeting, construction progress meetings, and specially called meetings throughout the progress of the work. The ENGINEER will:
 - 1. Prepare agenda for meetings.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
 - 4. Record the minutes; include significant proceedings and decisions.
 - 5. Reproduce and distribute copies of minutes.
- B. The CONTRACTOR and representatives of, where appropriate, subcontractors and suppliers shall attend meetings. The representative shall be qualified and authorized to act on behalf of the entity each represents.
- C. The CONTRACTOR shall attend and identify at the meetings the actual status of the Contract Work and, when the Work is not being performed consistently with the Contract Documents and construction schedules, shall identify at the meetings the steps he is taking to resolve the inconsistency.

1.02 Pre-construction Meeting

- A. The CONTRACTOR shall participate in a preconstruction meeting to be held after the effective date of the Agreement and prior to the date of Notice to Proceed.
- B. The following are expected to be in attendance:
 - 1. OWNER'S Representative and other staff as appropriate.
 - 2. ENGINEER and his professional consultants as appropriate.
 - 3. ENGINEER's Resident Project Representative.
 - 4. CONTRACTOR's Representative and Construction Superintendent.
 - 5. Subcontractors as appropriate.
 - 6. Utility representatives as appropriate.
 - 7. Others as appropriate.
- C. The following matters are expected to be addressed:
 - 1. Distribution and discussion of:
 - a. List of major subcontractors.
 - b. Project construction schedules.
 - 2. Critical work sequencing.
 - 3. Project Coordination.
 - 4. Designation of responsible personnel.

-
5. Procedures and processing of:
 - a. Field decisions.
 - b. Proposal requests.
 - c. Submittals.
 - d. Change Orders.
 - e. Applications for Payment.
 6. Distribution of Contract Documents.
 7. Procedures for maintaining Record Documents.
 8. Use of premises:
 - a. Office, work and storage areas.
 - b. OWNER'S requirements.
 9. Construction facilities, controls and construction aids.
 10. Temporary utilities.
 11. Housekeeping procedures.
 12. Insurance certifications.
 13. Liquidated damages for delay.
 14. Weekly job meetings.
 15. Laboratory testing of material requirements.

1.03 Construction Progress Meetings

- A. Construction progress meetings will be held monthly with the first meeting 30 days or less after the date of Notice to Proceed.
- B. Special construction progress meetings will be held as required by progress of the Work.
- C. The following are expected to be in attendance:
 1. OWNER Representative and other staff as appropriate.
 2. The ENGINEER and his professional consultants as appropriate.
 3. CONTRACTOR's Representative and/or construction Superintendent.
 4. Subcontractors as appropriate.
 5. Suppliers as appropriate.
 6. Others as appropriate.
- D. The following matters are expected to be addressed:
 1. Review and approve minutes of previous meeting.
 2. Review of work progress.
 3. Field observations, problems, conflicts.
 4. Problems which impede Construction Schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain Construction Schedule.
 7. Revisions to Construction Schedule.
 8. Progress and schedule during succeeding work period.
 9. Payment applications and processing.
 10. Submittals.
 11. Maintenance of quality standards.
 12. Changes, substitutions, and Change Orders.

-
- 13. Review proposed changes for:
 - a. Effect on Construction Schedule and completion date.
 - b. Effect on other contracts of the Project.
 - 14. Other matters as appropriate.
 - 15. Record drawings.
- E. The CONTRACTOR shall be prepared to discuss the above topics and to make commitments for resolving deficiencies.
- F. The CONTRACTOR shall provide a current submittal log at each progress meeting in accordance with Section 01340.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01310
CONSTRUCTION SCHEDULES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall comply with the General Conditions.
- B. Submit revised progress schedules periodically.

1.02 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal bar chart.
 - 1. Provide separate horizontal bar for each trade or operation.
 - 2. Horizontal time scale; identify the first work day of each week.
 - 3. Scale and spacing: To allow for notations and future revisions.
 - 4. Minimum sheet size: 8-1/2 inches by 11 inches.
- B. Format of listings: The table of contents of the Contract Documents.
- C. Identification of listings: Items of work.

1.03 CONTENT OF SCHEDULE:

- A. Construction Progress Schedule:
 - 1. Show the complete sequence of construction by activity.
 - 2. Show the dates for the beginning, and completion of each major element of construction.
 - 3. Show projected percentage of completion for each item, as of the first day of each month.
 - 4. Show an anticipated monthly payment schedule.
- B. Submittal Schedule for Shop Drawings, Product Data and Samples. Show:
 - 1. The dates for Contractor's submittal.
 - 2. The dates approved submittal will be required from the Engineer.

1.04 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
 - 1. Major changes in scope.
 - 2. Activities modified since previous submission.
 - 3. Revised projections of progress and completion.
 - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended, and its effect.

1.05 SUBMISSIONS

- A. Submit initial schedules in accordance with the General Conditions.
 - 1. Engineer will review schedules and return review copy within ten (10) days after receipt.
 - 2. If required, Contractor shall resubmit within seven (7) days after return of review copy.
- B. Submit revised progress schedules with each Application for Payment.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01340

SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

PART 1 GENERAL

1.01 Requirements Included:

- A. The Contractor shall submit to the Engineer for review and exception, if any, such working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
- B. Within fifteen (15) calendar days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer a complete list of preliminary data on items for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way relieve the Contractor from submitting complete shop drawings, data, and samples in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.
- C. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting. This log should include the following items:
 - 1. Submittal Description and Number assigned.
 - 2. Date to Engineer.
 - 3. Date returned to Contractor (from Engineer).
 - 4. Status of Submittal (No exceptions taken, returned for confirmation or resubmittal, rejected).
 - 5. Date of Resubmittal and Return (as applicable).
 - 6. Date material released (for fabrication).
 - 7. Projected date of fabrication.
 - 8. Projected date of delivery to site.
 - 9. Status of O&M manuals submittal.

1.02 Contractor's Responsibility

-
- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp or evidence that the Contractor has not performed the required review will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents.
- B. Determine and verify:
1. Field measurements.
 2. Field construction criteria.
 3. Catalog numbers and similar data.
 4. Conformance with Specifications and indicate all variances from the Specifications.
- C. The Contractor shall furnish the Engineer a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.
- D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him by the Engineer with no exceptions taken.
- E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than twenty-one (21) calendar days for checking and appropriate action from the time the Engineer receives them.
- F. The Contractor shall submit five (5) copies of shop drawings and descriptive or product data submittal to complement shop drawings to the Engineer which will be retained for his use.
- G. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary shop drawings.
- H. The Contractor shall utilize a Sequential Numbering System for submittals (1-999). Resubmittals or confirming material shall be assigned a letter next to the submittal number, i.e. A= second submittal, B= third submittal, etc.
- I. Submittals shall include a certified statement of compliance to the requirements detailed in the specifications in addition to other submittal requirements. This certification shall be prepared by the manufacturer and not the local supplier. Validity of the authority and position of the person signing the certification shall be verified by a Notary Public. The statement of compliance shall address each point of conformance contained in the governing specifications with definite comments of either compliance or non-compliance. Statements of non-compliance with points of conformance shall be accompanied by a statement of

justification as to the reason for non-conformance and why the non-complying feature is considered to be either equal to or better than the specified feature. The Engineer will use the certified statement of compliance in his evaluation of the submittal rendering a judgment as to equality to the specified product and issuing a statement as to whether the product is acceptable for or rejected from incorporation into the work.

- J. When a manufacturer named in the controlling specification is chosen to supply a product and the details of manufacture, size, and installation are shown on this standard catalog cut sheets, the manufacturer may submit the certified statement of compliance as detailed above along with installation details specific to the work such as laying schedules, etc. as required, deleting the standardized catalog data.

1.03 Engineer's Review of Shop Drawings

- A. The Engineer's review of drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation.
- B. The review of drawings and schedules will be general, and shall not be construed:
1. as permitting any departure from the Contract requirements;
 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, omissions and materials;
- C. If the drawings or schedules as submitted describe variations per subparagraph (1.04.D), and show a departure from the Contract requirements which Engineer finds to be in the best interest of the Owner and to be so minor as not to involve a change in Contract Price or Time, The Engineer may return the reviewed Drawings without noting any exception.
- D. After the ENGINEER completes his review, the Shop Drawings will be marked with one of the following notations:
1. No Exceptions Taken.
 2. Make Corrections Noted.
 3. Revise and Resubmit.
 4. Rejected.
 5. Submit Specified Item.
- E. If a submittal is acceptable, it will be marked "No Exception Taken" or "Make Corrections Noted". Three copies of the submittal will be returned to the CONTRACTOR.
- F. Upon return of a submittal marked "No Exception Taken" or "Make Corrections Noted", the CONTRACTOR may order, ship or fabricate the materials included on the submittal, provided it is in accordance with the corrections indicated.
- G. If a Shop Drawing action is "Make Corrections Noted" but has extensive corrections or corrections affecting other drawings or Work, the ENGINEER may require that the CONTRACTOR make the corrections indicated thereon and resubmit the Shop Drawings for

record purposes. In this case, the submittal will be marked "Make Corrections Noted-Resubmit".

- H. If a submittal is unacceptable, two copies will be returned to the CONTRACTOR with one of the following notations:
 - 1. "Revise and Resubmit"
 - 2. "Rejected"
- I. Upon return of a submittal marked "Revise and Resubmit", the CONTRACTOR shall make the corrections indicated and repeat the initial approval procedure. The "Rejected" notation is used to indicate material or equipment that is not acceptable. Upon return of a submittal so marked, the CONTRACTOR shall repeat the initial approval procedure utilizing acceptable material or equipment.
- J. Submittals lacking adequate details or information to allow the ENGINEER to determine whether or not the submittal meets the intent of the Contract specifications shall be marked "Submit Specified Item" and returned without further comment.
- K. Shop Drawings or other submittals not bearing the ENGINEER'S "No Exception Taken" or "Make Corrections Noted" notations shall not be issued to Subcontractors nor utilized for construction purposes. No Work shall be performed or equipment installed without a drawing or submittal bearing one of these notations.
- L. In the event the CONTRACTOR obtains the ENGINEER'S approval for the use of equipment other than that which is shown or specified, the CONTRACTOR shall, at his own expense and using methods approved by the ENGINEER, make all changes to the Work, including structures, piping, electrical, equipment and controls, that may be necessary to accommodate this equipment.
- M. Resubmittals will be handled in the same manner as first submittals. The Contractor shall direct specific attention to revisions other than the corrections requested by the Engineer on previous submissions by written details or markings on the resubmitted Shop Drawings. The Contractor shall make any corrections required by the Engineer.
- N. If the Contractor considers any correction indicated on the Drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.
- O. The Engineer will review a submittal/resubmittal a maximum of three times after which cost of review will be borne by the Contractor. The cost of engineering shall be equal to the Engineer's charges to the Owner under the terms of the Engineer's agreement with the Owner.
- P. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions or approval from the Engineer.

Q. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor, and will be considered "NOT APPROVED" until resubmitted.

1.13 SHOP DRAWINGS

- A. Shop drawings shall be complete and detailed.
- B. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.
- C. Each shop drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
 - 1. Number and title of the drawing.
 - 2. Date of drawing or revision.
 - 3. Name of project building or facility.
 - 4. Name of contractor and subcontractor submitting drawing.
 - 5. Clear identification of contents and location of the work.
 - 6. Specification number and title.
- D. If Drawings show variations from Contract requirements because of standard Shop practice or other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such Drawings have been reviewed.
- E. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material as required. Materials and equipment lists shall give for each item thereon the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish, and all other pertinent data.
- F. The Contractor shall provide a list including the equipment name, address, and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained for all mechanical and electrical equipment furnished.
- G. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required Shop Drawings. The

installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.

- H. Only the Engineer will utilize the color red in marking Shop Drawing submittals.
- I. Before final payment is made, the Contractor shall furnish to Engineer five (5) sets of record shop drawings all clearly revised, complete and up to date showing the permanent construction as actually made for all reinforcing and structural steel, miscellaneous metals, process and mechanical equipment, yard piping, electrical system and instrumentation system.

1.13 Working Drawings

- A. Working drawings shall be considered to mean the Contractor's plans for temporary structures.
- B. Copies of working drawings as noted in subparagraph 1.02, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for work.
- C. The Engineer will not review working drawings but shall use them as information to monitor the work performed by the Contractor.

1.14 Samples

- A. The Contractor shall furnish for the review of the Engineer samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed and the Contractor shall prepay all shipping charges. Materials or equipment for which samples are required shall not be used in work until reviewed by the Engineer.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
 - 2. Name of Contractor and Subcontractor
 - 3. Material or Equipment represented
 - 4. Place of Origin
 - 5. Name of Producer and Brand (if any).
 - 6. Location in Project

(Samples of finished materials shall have additional marking that will identify them under the finished schedules.)

- C. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in subparagraph 1.06B above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer under separate cover and the remaining copy shall be for the Contractor's records. Review of a sample shall be only for the characteristics or use named and shall not be construed to change or modify any Contract requirements.
- D. Reviewed samples not destroyed in testing shall be sent to the Engineer or stored at the site of the work. Reviewed samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the reviewed samples. Samples which failed testing or were rejected will be returned to the Contractor at his expense, if so requested at time of submission.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Contractor will employ and pay for the services of an Independent Testing Laboratory to perform testing specifically indicated on the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.

- A. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.

1.02 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

Laboratory is not authorized to:

- A. Release, revoke, alter or enlarge on requirements of Contract Documents.
- B. Approve or accept any portion of the Work.
- C. Perform any duties of the Contractor.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to Work, to Manufacturer's operations.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other materials mixes which require control by the testing laboratory.
- D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Owner may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.
- E. Furnish incidental labor and facilities:
 - 1. To provide access to Work to be tested.

-
- 2 To obtain and handle samples at the Project site or at the source of the product to be tested.
 3. To facilitate inspections and tests.
 4. For storage and curing of test samples.
- F. Notify laboratory at least 24 hours in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
- G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the Contractor's convenience and as approved by the Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Material and equipment incorporated into the Work shall:

- A. Conform to applicable specifications and standards.
- B. Comply with size, make, type, and quality specified to the greatest extent possible, detailing all aspects and providing explicit reasons for parameters not in compliance and specifically approved in writing by the Engineer.
- C. Manufactured and Fabricated Products:
 - 1. Design, fabricate, and assemble in accord with the best engineering and standard shop practices.
 - 2. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - 3. Two or more items of the same kind shall be produced, by the same manufacturer.
 - 4. Products shall be suitable for service conditions.
 - 5. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
- D. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 APPROVAL OF MATERIALS

- A. Only new materials and equipment shall be incorporated in the Work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the Work without prior approval of the Engineer.
- B. The Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product along with references to the applicable section(s) of the specifications to form an opinion as to its conformity to the specifications. The data shall comply with Paragraph 1.06 of this Section.
- C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the

specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense. Except as otherwise noted, the Contractor will make arrangements for and pay for the tests. Where such tests confirm compliance with the specifications, the Owner will reimburse the actual charges of the testing firm paid by the Contractor.

- D. Contractor shall submit data and samples sufficiently early to permit consideration, approval, manufacture, and delivery of materials before they are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against the Owner or the Engineer.
- E. The materials and equipment used in the Work shall correspond to the approved samples or other data.

1.03 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

- A. When Contract Documents require that installation of the Work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including five copies to the Engineer. One complete set of the installation instructions shall be available for use on the job site during and through completion of the Work.
- B. Handle, install, connect, clean, condition and adjust products as required by the manufacturer's instructions and in conformity with specified requirements.
 - 1. Should the specified requirements conflict with the manufacturer's instructions, the manufacturer's instructions shall have priority unless changes are authorized in writing by the manufacturer.
 - 2. Should job conditions conflict with the manufacturer's instructions, consult with the manufacturer for clarification.
 - 3. Clarifications of installation instructions shall be issued only by the manufacturer, shall be in writing, and shall be distributed to all parties involved in the installation as stated above and prior to alteration of the installation procedures.
 - 4. Do not proceed with the Work without clear instructions concerning the specific installation procedures.
- C. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by the manufacturer.

1.04 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of Products as required by the currently approved construction schedule coordinating each delivery to avoid conflict with other work and conditions at the site.
 - 1. Deliver Products in a undamaged condition, in the manufacturer's original containers or packaging and with identifying labels intact and legible.
 - 2. Prior to accepting delivery, inspect shipments to assure compliance with approved submittal, and that the Products have been properly protected and are undamaged.
- B. Provide equipment and personnel to handle Products preventing soiling or damage to the Products or their protective packaging.

1.05 STORAGE AND PROTECTION

- A. Store Products in accord with manufacturer's instruction, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weathertight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 - 3. Store fabricated products above the ground, on blocking or skids, prevent spoiling, staining or corrosion. Cover products which are subject to deterioration with impervious sheet coverings and provide adequate ventilation to avoid condensation.
 - 4. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- B. All materials and equipment to be incorporated in the Work shall be handled and stored in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and other injury, theft or damage.
- C. Cement and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All miscellaneous steel, structural steel and reinforcing steel shall be stored off the ground, kept free of accumulations of dirt and grease, and in areas free of standing water to minimize rusting. Precast concrete sections shall be handled and stored in a manner to prevent staining, chipping or cracking. Brick, block and similar masonry products shall be handled and stored in a manner to reduce staining, breaking, chipping, cracking, and spalling.
- D. All materials which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended, including aesthetics, shall be promptly removed from the site of the work.
- E. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections and exercise or rotate moving parts of stored products as required by the

manufacturer to assure that products are maintained under specified conditions and free from damage or deterioration.

- F. Provide substantial coverings as necessary to protect installed products from damage caused by traffic and subsequent construction operations. Remove the protective covering when no longer needed.
- G. The Contractor shall be responsible for all material, equipment, and supplies sold and delivered to the Owner under this Contract until final inspection of the Work and acceptance thereof by the Owner. In the event any such material, equipment, and supplies are lost, stolen, damaged, or destroyed prior to final inspection and acceptance they shall be replaced by the Contractor.
- H. Should the Contractor fail to take proper action to properly store and handle equipment supplied under this Contract, the Owner retains the right to notify the Contractor in writing of the deficiencies, to correct all deficiencies and deduct the cost associated with these corrections from the contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administration, clerical, engineering and any other costs associated with making the necessary corrections.

1.06 SUBSTITUTIONS AND PRODUCT OPTIONS

A. Products List:

Within fifteen (15) days after the Notice to Proceed, submit to the Engineer complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor.

B. Contractor's Options:

- 1. For Products specified only by reference standard, select any product meeting that standard.
- 2. For Products specified by naming one or more Products or manufacturers and "or equal", Contractor must submit a request as for substitutions for any Product or manufacturer not specifically named.

C. Substitutions:

- 1. For a period of thirty (30) days after the Effective Date of the Agreement, the Engineer will consider written requests from Contractor for substitution of Products.

-
2. Submit a separate request for each Product, supported with complete data, with drawings and samples as appropriate, including:
 - a. Comparison of the qualities of the proposed substitution with that specified.
 - b. Changes required in other elements of the work because of the substitution.
 - c. Effect on the construction schedule.
 - d. Cost data comparing the proposed substitution with the Product specified.
 - e. Any required license fees or royalties.
 - f. Availability of maintenance service, and source of replacement materials.
 3. The Engineer shall be the judge of the acceptability of the proposed substitution.

D. Contractor's Representation:

A request for a substitution constitutes a representation that Contractor:

1. Has investigated the proposed Product and determined that it is equal to or superior in all respects to that specified.
2. Will provide the same warranties or bonds for the substitution as for the Product specified.
3. Will coordinate the installation of an accepted substitution into the Work, and make such other changes as may be required to make the Work complete in all respects.
4. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

1.07 SPECIAL TOOLS

Manufacturers of equipment and machinery shall furnish any special tools required for normal adjustment, operations and maintenance, together with instructions for their use. The Contractor shall preserve and deliver to the Owner these tools and instructions in good order no later than upon completion of the Contract.

1.08 WARRANTY

For all major pieces of equipment, submit a warranty from the equipment manufacturer. The manufacturer's warranty period shall be concurrent with the Contractor's as stipulated in the specifications for each piece of equipment.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01630

SUBSTITUTIONS

PART 1 GENERAL

1.01 General

Requests for review of a substitution shall conform to the requirements of Article 6.05 of the General Conditions and shall contain complete data substantiating compliance of proposed substitution with Contract Documents.

1.02 Substitutions

- A. During a period of 60 days after execution of Contract, ENGINEER will consider written requests from CONTRACTOR for substitution of products or construction methods (if specified).
 - 1. After end of specified period, requests will be considered only in case of unavailability of products or other conditions beyond control of CONTRACTOR.
 - 2. If the CONTRACTOR proposes to use products other than named manufacturers in the technical Specification, the ENGINEER reserves the right to require the CONTRACTOR to submit information within the first 30 days after the NOTICE TO PROCEED verifying that the proposed equipment will comply with the Specifications.
- B. Requests for review of a substitution shall conform to the requirements of Article 6.05 of the General Conditions, and shall contain complete data substantiating compliance of proposed substitution with the Contract Documents.
- C. In making request for substitution, CONTRACTOR represents:
 - 1. CONTRACTOR has investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.
 - 2. CONTRACTOR will provide the same or better warranties or bonds for proposed substitution as for product or method specified.
 - 3. CONTRACTOR waives all claims for additional costs or extension of time related to proposed substitution that subsequently may become apparent.
- D. Proposed substitutions will not be accepted if:
 - 1. They are only shown or implied on the Shop Drawings.
 - 2. Acceptance will require substantial revision of Contract Documents.
 - 3. They will change design concepts or Specifications.
 - 4. They will delay completion of the Work, or the work of other contractors.
- E. The ENGINEER will determine whether substitute brands or products are equal to those specified in the Contract Documents. No substitute will be ordered or installed without the ENGINEER'S prior written acceptance.
- F. The OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a

special performance guarantee or other surety with respect to any substitute.

- G. If the ENGINEER determines that a proposed substitute is not equal to that specified or described in the Drawings or Specifications, CONTRACTOR shall furnish one of the brands or products specified or described, at no additional cost to the OWNER.
- H. Engineering Costs:
1. The ENGINEER will record all time required in evaluating substitutions proposed by CONTRACTOR and in making any change in the Drawings or Specifications occasioned thereby. Whether or not the ENGINEER accepts a proposed substitute CONTRACTOR will reimburse the OWNER for the actual cost of the ENGINEER for evaluating any proposed substitute which either does not meet the requirements of the Drawings and Specifications, or the acceptance of which would require changes to other portions of the Work.
 2. CONTRACTOR shall reimburse OWNER for all associated engineering costs, including redesign, additional shop drawing reviews, investigations, consultant fees and revision of the Contract Documents required because of the substitution.
- I. The time required by the ENGINEER to evaluate and either accept or reject proposed substitutes is included in the Contract Time and no extension of the Contract Time shall be allowed therefore.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01710

CLEANING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Cleaning shall include daily "policing" of the work and surrounding areas to clear general debris waste paper, wood scraps, broken concrete, loose riprap, and other objectionable material along with the final cleanup of site(s) required for project acceptance. **DAILY CLEANUP IS REQUIRED.**

1.02 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the Work, the site and adjacent properties, free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide onsite containers for the collection of waste materials, debris and rubbish. All waste materials including containers, food debris and other miscellaneous materials must be disposed of daily in onsite containers.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.02 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- D. Prior to final completion or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas to verify that the entire Work is clean.

**** END OF SECTION ****

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Maintain at the site for the Owner one record copy of:

- A. Conformed Drawings.
- B. Conformed Specifications.
- C. Change Orders and other Modifications to the Contract.
- D. Engineer's Field Orders or written instructions.
- E. Approved Shop Drawings, Working Drawings and Samples.
- F. Field Test records.
- G. Construction photographs.
- H. Latest, Approved Progress Schedule.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in a manner and location to prevent damage.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI section numbers.
- C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the Owner.
- E. As a prerequisite for monthly progress payments, the Contractor is to exhibit the currently updated "record documents" for review by the Owner.

1.03 MARKING DEVICES

Provide felt tip marking pens for recording information in the color code designated by the Owner.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" with rubber stamp.
- B. Record information concurrently with construction progress and do not conceal any work until required information is recorded.
- C. Legibly mark drawings to record actual construction:
 - 1. The Contractor shall use the following color code in marking Contract Drawings:
 - a. Yellow for no change.
 - b. Red to indicate additions, deletions and changes.
 - 2. Elevations of various structure elements in relation to elevation datum.
 - a. Elevations referenced to control points established by the Owner's agent.
 - b. Specifically, elevations of drainage culvert inverts, ditch grades, top of roadway and driveway curbs, bridges, etc.
 - 3. Location of internal utilities and appurtenances concealed in the construction by referencing to visible and accessible features of the structure.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by Field Order or by Change Order.
 - 6. Details not on original contract drawings.
- D. Specifications and Addenda; Legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.
- E. Shop Drawings (after final review):

-
- F. Certified site survey and line elevations and stationing at 100 foot increments and all points of change of direction of channel improvements (Section 01050) by a registered land surveyor.

1.05 SUBMITTAL

- A. At Contract close-out, deliver Record Documents to the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each Record Document.
 5. Signature of Contractor or his authorized representative.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION(NOT USED)

*** * END OF SECTION * ***

SECTION 01740

WARRANTIES AND BONDS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds, as in Articles 5 and 13 of the General Conditions.
- B. Co-execute submittals when so specified.
- C. Review submittals to verify compliance with Contract Documents.
- D. Submit to the Owner for review.

1.02 SUBMITTAL REQUIREMENTS

- A. Assemble and include warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, couplers, and subcontractors including effective dates.
- B. Number of original signed copies required. Two (2) each.
- C. Table of Contents. Neatly typed in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning warranty, and bond.
 - 5. Duration of warranty.
 - 6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty or bond.
 - 7. Contractor, name of responsible principal, address and telephone number.

1.04 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2-inches x 11-inches, punch sheets for standard 3-post binder.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS." List:
 - a. Title of Project.
 - b. Name of Contractor.
- C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of 2-inches, "D" ring.

1.05 WARRANTY SUBMITTAL REQUIREMENTS

- A. For all components of the work, unless stated otherwise in the specifications for each individual item of equipment, submit a written warranty from the manufacturer to replace promptly any component thereof which, in the sole opinion of the Engineer, has defects in design, workmanship, materials, or performance within a one (1) year period following the date of acceptance for operation (Substantial Completion) by the Owner. The manufacturer's warranty period shall be concurrent with the Contractor's for one (1) year, unless otherwise specified, commencing at the time of acceptance for operation (beneficial use) by the Owner and shall be read in conjunction with the Contractor's warranty which shall operate together to provide for replacement of defective components and restoration of proper operation. The Contractor shall be solely responsible for both warranties.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-227-10

CODE: (IS)

DATE: 01/25/2012

SUBJECT: Hydroseeding

Section 907-227, Hydroseeding, is hereby added to and made part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-227--HYDROSEEDING

907-227.01--Description. This work consists of furnishing, transporting, placing, plant establishment and all work necessary to produce a satisfactory and acceptable growth of grass. The seeds, fertilizers, tackifier, and mulch shall be incorporated using the hydroseeding process. These items shall be combined into a mixture and force-applied to the areas to be grassed.

907-227.02--Materials. The Contractor shall, prior to application, furnish the Engineer with invoices of all materials used in the grassing operation.

907-227.02.1--Fertilizers. Fertilizers for purposes of these specifications shall be understood to include standard manufactured products consisting of single or combination ingredients.

All fertilizers shall comply with the State fertilizer laws and Subsection 715.02.

907-227.02.2--Seeds. Seeds shall meet the requirements of Subsection 715.03, subject to the provisions of this subsection. The Contractor shall acquire seed from persons registered with the Mississippi Department of Agriculture and Commerce.

Except for the germination requirements, bags of seeds properly labeled or tagged according to law and indicating characteristics meeting or exceeding the requirements of Subsection 715.03 will be acceptable for planting.

The Contractor should provide adequate dry storage facilities for seeds, and shall furnish access to the storage for sampling stored seed.

907-227.02.3--Mulching. The rate of application of fiber mulch shall be as recommended by the manufacture of the fibers mulch.

907-227.02.3.1--Wood Fiber Mulch. Wood fiber mulch shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed and fertilizer to form a homogeneous slurry. The fibers shall intertwine physically to form a strong moisture-holding mat on the ground surface and allow rainfall to percolate the underlying soil. The fiber material shall be heat processed so as to

contain no germination or growth-inhibiting factors. The mulch shall be dyed an appropriate color to facilitate the application of material using non-toxic dye.

907-227.02.3.2--Cellulose Fiber Mulch. Cellulose fiber mulch consist of recycled paper stock products which are shredded into small pieces particular for application by hydraulic seeding equipment. It shall mix readily and uniformly under agitation with water and blend with grass seed and fertilizer to form a homogeneous slurry. When applied to the ground surface, the material shall form a strong moisture-holding mat, allow rainfall to percolate the underlying soil, and remain in place until the grass root system is established. The material shall contain no growth inhibiting characteristic or organisms. The mulch shall be dyed an appropriate color to facilitate the application of material using non-toxic dye.

907-227.02.3.3--Wood/Cellulose Fiber Mulch. Wood/cellulose fiber mix hydroseeding mulch shall consist of a combination of the above wood and cellulose fibers at a ratio recommended by the manufacturer of the products.

907-227.02.3.4--Straw Mulch. Straw mulch shall consist of a natural straw fiber. This material shall be a minimum 90% straw and essentially free from plastic materials or other non-bio degradable substances. The material shall be disperse into a uniform mulch slurry when mixed with water.

907-227.02.3.5--Tackifier. The tackifier will serve the purpose of an adhesive to form a bond between the soil, fiber, and seed particles. It will also allow the soil to retain moisture.

The tackifier shall be of the organic or synthetic variety.

907-227.03--Construction Requirements.

907-227.03.1--Ground Preparation. Light ground preparation consists of plowing, loosening, and pulverizing the soil to form suitable beds for seeding items in reasonably close conformity with the established lines and grades without appreciable humps or depressions. Unless otherwise specified, the pulverized and prepared seedbed should be at least four inches deep and shall be reasonably free of large clods, earth balls, boulders, stumps, roots and other objectionable matter. The Engineer may eliminate or alter the requirements for ground preparation due to site conditions.

907-227.03.2--Fertilizing. The Contractor shall furnish all equipment necessary to properly handle, store, uniformly spread, and incorporate the specified application of fertilizer.

The Contractor shall incorporate bag fertilizer at a rate of 1000 pounds per acre of 13-13-13 commercial fertilizer. The equivalent rate of other type fertilizers will be allowed if the equivalent percentages of Nitrogen, Phosphorus and Potassium are obtained. Any changes in the type or rate of application of the fertilizers shall be approved by the Engineer prior to being incorporated.

Agricultural limestone will be incorporated into the area and paid for in accordance with Section 213 of the Standard Specifications.

907-227.03.3--Seeding.

907-227.03.3.1--General. The Contractor shall use the vegetation schedule in the plan for the correct types of seed and application rates, unless otherwise noted or approved by the Engineer.

When a vegetation schedule for permanent grass is not shown in the plans, the following types of seed and application rates shall be used, unless otherwise approved by the Engineer.

Bermudagrass -----	20 pounds per acre
Bahiagrass -----	25 pounds per acre
Tall Fescue -----	15 pounds per acre
Crimson Clover -----	20 pounds per acre

At the completion of the project, a satisfactory growth of grass will be required. The Contractor should reference Subsection 210 for satisfactory growth and coverage of dormant seed.

907-227.03.3.2--Plant Establishment. The Contractor should provide plant establishment on all areas seeded until release of maintenance. Plant establishment shall consist of preserving, protecting, watering, reseeding, mowing, and other work necessary to keep the seeded areas in satisfactory condition.

Plant establishment should be provided for a minimum period of 45 calendar days after completion of seeding. In the event satisfactory growth and coverage has not been attained by the end of the 45-day period, plant establishment should be continued until a satisfactory growth and coverage is provided for at least one kind of plant. The Contractor should reference Section 210 of the Standard Specifications for more information.

907-227.03.3.3--Growth and Coverage. It shall be the Contractor's responsibility to provide satisfactory growth and coverage of grasses, legumes, or combination produced from the specified seeding.

Growth and coverage on seeded areas will be considered to be in reasonably close conformity with the intent of the contract when the type of vegetation specified, exclusive of that from seeds not expected to have germinated and shows growth at that time, has reached a point of maturity where stems or runners overlap adjacent similar growth in each direction over the entire area.

Final acceptance of the project will not be made until a satisfactory growth of grass has been acknowledged by the Engineer.

907-227.03.4--Mulching. At the Contractor's option, mulch may be wood fiber, cellulose fiber, a mixture of wood and cellulose fibers, or straw fiber. The mulch shall be applied at the rate recommended by the manufacturer in a mixture of water, seed and fertilizer. Any changes in the rate of application of the mulch shall be approved by the Engineer prior to its use.

907-227.03.5--Equipment. Hydraulic equipment shall be used for the application of fertilizers, seeds and slurry of the prepared mulch. This equipment shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix slurry of the specified amount of fiber, fertilizer, seed and water. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with a set of hydraulic spray nozzles, which will provide even distribution of the slurry on the various areas to be seeded.

The seed, fertilizer, mulch and water shall all be combined into the slurry tank for distribution of all ingredients in one operation as specified herein. The materials shall be combined in a manner recommended by the manufacturer. The slurry mixture shall be so regulated that the amounts and rates of application shall result in a uniform application of all materials at rates not less than the amounts specified. Using the color of the mulch as a guide, the equipment operator shall spray the prepared seedbed with a uniform visible coat. The slurry shall be applied in a sweeping motion, in an arched stream, so as to fall like rain, allowing the mulch to build upon each other until an even coat is achieved.

907-227.03.6--Protection and Maintenance. The Contractor should maintain and protect seeded areas until release of maintenance of the project. The Contractor should take every precaution to prevent unnecessary foot and vehicular traffic.

The Contractor should mow or otherwise remove or destroy any undesirable growth on all areas mulched to prevent competition with the desired plants and to prevent reseeding of undesirable growth.

907-227.04--Method of Measurement. Hydroseeding, complete and accepted, will be measured by the acre. No separate payment will be made for ground preparation, seeds, fertilizers, or mulch. Acceptance will be based on a satisfactory growth and coverage of seeds planted.

Agricultural limestone shall be measured and paid for under Section 213 of the Standard Specifications.

907-227.05--Basis of Payment. Hydroseeding, measured as prescribed above, will be paid for at the contract unit price per acre, which will be full compensation for all required materials, equipment, labor, testing and all work necessary to establish a satisfactory growth of grass.

Payment will be made under:

907-227-A: Hydroseeding

- per acre

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-237-4

CODE: (SP)

| DATE: 03/13/2012

SUBJECT: Wattles

Section 907-237, Wattles, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-237 - WATTLES

907-237.01--Description. This work consists of furnishing, constructing and maintaining wattles for the retention of soil around inlets, swale areas, small ditches, sediment basins and other areas as necessary. Also, the work includes removing and disposing of the wattles and silt accumulations.

Measurement and payment for wattles will be made only when a pay item is included in the bid schedule of the proposal. The quantity is estimated for bidding purposes only and will be dependent upon actual conditions which occur during construction of the project.

| **907-237.02--Materials.** Wattles used around inlets shall have a diameter of twelve inches (12") and a length adequate to meet field conditions. Wattles used at other locations shall have a diameter of twenty inches (20") and a length adequate to meet field conditions. The minimum diameter for the above wattle sizes shall be one inch (1") less than the specified diameter.

The stakes used in securing the wattles in place shall be placed approximately three feet (3') apart throughout the length of the wattle. Stakes shall be wooden and of adequate size to stabilize the wattles to the satisfaction of the Engineer.

In addition to the requirements of this specifications, wattles shall be listed on the Department's "Approved Sources of Materials".

907-237.03--Construction Requirements.

907-237.03.1--General. The wattles shall be constructed at the locations and according to the requirements shown on the erosion control plan.

907-237.03.2--Maintenance and Removal. The Contractor shall maintain the wattles and remove and dispose of silt accumulations.

When the wattles are no longer needed, they shall be removed and the Contractor shall dispose of silt accumulations and treat the disturbed areas in accordance with the contract requirements.

907-237.04--Method of Measurement. Wattles of the size specified will be measured per linear foot.

907-237.05--Basis of Payment. Wattles, measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for installation, maintaining and removal of the wattles, the removal and disposal of silt accumulations and any required restoration of the disturbed areas.

Payment will be made under:

907-237-A: Wattles, Size

- per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-304-13

CODE: (SP)

DATE: 06/06/2012

SUBJECT: Granular Courses

Section 907-304, Granular Courses, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-304.02--Materials. After the first paragraph of Subsection 304.02.1 on page 183, add the following.

Crushed concrete meeting the requirements of Subsection 907-703.04.3 may be used in lieu of granular courses or crushed stone courses specified in the contract. This applies to base courses, shoulders, or other required construction on a prepared foundation.

907-304.03--Construction Requirements.

907-304.03.5--Shaping, Compacting and Finishing. Delete the sixth paragraph of Subsection 304.03.5 on page 185.

Delete the first table in Subsection 304.03.5 on page 186 and substitute the following.

Granular Material	Lot	Individual
<u>Class</u>	<u>Average</u>	<u>Test</u>
7,8,9 or 10	97.0	93.0
5 or 6	99.0	95.0
3 or 4	100.0	96.0
1 or 2	102.0	98.0
Crushed Courses*	99.0	95.0

* When placed on filter fabric on untreated subgrade, the individual tests and the average of the five (5) tests shall equal or exceed the following values.

<u>Lot Average</u>	<u>Individual Test</u>
96.0	92.0

907-304.05--Basis of Payment. Add the “907” prefix to the pay items listed on page 187.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-401-7

CODE: (SP)

DATE: 12/02/2014

SUBJECT: Asphalt Pavements

Section 401, Hot Mix Asphalt (HMA) - General, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby deleted and replaced as follows.

SECTION 907-401 - ASPHALT PAVEMENT -- GENERAL

907-401.01--Description. These specifications include general requirements that are applicable to all types of asphalt whether producing Hot Mix Asphalt (HMA) mixtures or Warm Mix Asphalt (WMA) mixtures. These specifications also include the specific requirements for each particular mixture when deviations from the general requirements are necessary.

This work consists of the construction of one or more lifts of asphalt pavement in accordance with these specifications and the specific requirements for the mixture to be produced and in reasonably close conformity with the lines, grades, thicknesses and typical sections shown on the plans or established by the Engineer.

907-401.01.1--Definitions.

Maximum Sieve Size - Maximum sieve size is the smallest sieve size at which 100 percent of the aggregate passes.

Nominal Maximum Sieve Size - The nominal maximum sieve size is one sieve size larger than the first sieve to retain more than 10 percent of the aggregate.

Maximum Density Line - The maximum density line is a straight line plot on the FHWA 0.45 power gradation chart which extends from the zero origin point of the chart through the plotted point of the combined aggregate gradation curve on the nominal maximum sieve size.

Mechanically Fractured Face - An angular, rough, or broken surface of an aggregate particle created by crushing as determined by ASTM Designation: D 5821.

907-401.02--Materials.

907-401.02.1--Component Materials.

907-401.02.1.1--General. Component materials will be conditionally accepted at the plant subject to later rejection if incorporated in a mixture or in work which fails to meet contract requirements.

907-401.02.1.2--Aggregates. The source of aggregates shall meet the applicable requirements of Section 703.

907-401.02.1.2.1--Coarse Aggregate Blend. Mechanically fractured faces by weight of the combined mineral aggregate coarser than the No. 4 sieve:

<u>Mixture</u>	<u>Percent Fractured Faces, minimum</u>
25-mm	70, one-face
19-mm *	80, one-face
12.5-mm	90, two-face
9.5-mm	90, two-face
4.75-mm	90, two-face

- * When used on routes requiring polymer modified asphalt, the top intermediate lift (19-mm mixture), including travel lane and adjacent lane, shall have at least 90 percent two fractured faces minimum. When placed on an existing Portland Cement Concrete surface, all intermediate lifts (19-mm mixture) shall have at least 90 percent fractured two faces minimum.

The maximum percentage by weight of flat and elongated particles, for all mixes other than 4.75-mm, maximum to minimum dimension greater than 5, shall not exceed 10% for all mixtures. This shall be determined in accordance with ASTM Designation: D 4791, Section 8.4, on the combined mineral aggregate retained on the 3/8" sieve.

907-401.02.1.2.2--Fine Aggregate Blend. Of all the material passing the No. 8 sieve and retained on the No. 200 sieve, not more than 60 percent shall pass the No. 30 sieve.

Uncrushed natural sand shall pass the 3/8" sieve and may be used, excluding the content in RAP, in the percentages of the total mineral aggregate by weight set out in the following table:

Mixture	Maximum Percentage of Natural Sand by Total Weight of Mineral Aggregate		
	HT	MT	ST
25-mm	10	10	20
19-mm	10	10	20
12.5-mm	10	10	20
9.5-mm	10	10	10
4.75-mm	25	30	35

907-401.02.1.2.3--Combined Aggregate Blend.**Design Master Range**

Mixture:	25-mm	19-mm	12.5-mm	9.5-mm	4.75-mm
Nominal Maximum Sieve Size:	1 inch	3/4 inch	1/2 inch	3/8 inch	1/4 inch
Sieve Size	Percent Passing				
1½ inch	100				
1 inch	90-100	100			
¾ inch	89 max.	90-100	100		
½ inch	-	89 max.	90-100	100	100
3/8 inch	-	-	89 max.	90-100	95-100
No. 4	-	-	-	89 max.	90-100
No. 8	16-50	18-55	20-60	22-70	-
No. 16	-	-	-	-	30-60
No. 200	4.0-9.0	4.0-9.0	4.0-9.0	4.0-9.0	6.0-12.0

For MT and HT mixtures, the combined aggregate gradation of the job mix formula, when plotted on FHWA 0.45 power chart paper, shall fall entirely below the Maximum Density Line on all sieve sizes smaller than the No. 4 sieve. However, MT and HT mixtures having a minimum fine aggregate angularity index of 44.0, per ASTM Designation: C1252, Method A, may be designed above the maximum density line.

The 9.5-mm mixtures shall have a minimum fine aggregate angularity of 44.0 for HT and MT mixtures and 40.0 for ST mixtures when tested on combined aggregate in accordance with ASTM Designation: C1252 Method A. The 4.75-mm mixtures shall have a minimum fine aggregate angularity of 45.0 for all design levels when tested on combined aggregate in accordance with ASTM Designation: C 1252, Method A.

The minus No. 40 fraction of the combined aggregate shall be non-plastic when tested according to AASHTO Designation: T 90. The clay content for the combined aggregate for underlying layers shall not exceed 1.0 percent, and for the top layer shall not exceed 0.5 percent by weight of the total mineral aggregate when tested according to AASHTO Designation: T 88.

907-401.02.1.3--Bituminous Materials. Bituminous materials shall meet the applicable requirements of Section 702 for the grade specified.

Tack coat shall be the same neat grade asphalt cement used in the mixture being placed or those materials specified for tack coat in Table 410-A on the last page of Section 410. Emulsified asphalt shall not be diluted without approval of the Engineer.

907-401.02.1.4--Blank.

907-401.02.1.5--Hydrated Lime. Hydrated lime shall meet the requirements of Subsection

714.03.2 for lime used in soil stabilization.

907-401.02.1.6--Asphalt Admixtures. Additives for liquid asphalt, when required or permitted, shall meet the requirements of Subsection 702.08.

907-401.02.1.7--Polymers. Polymers for use in polymer modified asphalt pavements shall meet the requirements of Subsection 702.08.3.

907-401.02.2--WMA Products and Processes. The Department will maintain a list of qualified WMA products and processes. No product or process shall be used unless it appears on this list.

The Contractor may propose other products or processes for approval by the Product Evaluation Committee. Documentation shall be provided to demonstrate laboratory performance, field performance, and construction experience.

907-401.02.3--Composition of Mixtures.

907-401.02.3.1--General. Unless otherwise specified or permitted, the asphalt shall consist of a uniform mixture of asphalt, aggregate, hydrated lime and, when required or necessary to obtain desired properties, antistripping agent and/or other materials.

The total amount of crushed limestone aggregate for mixtures, excluding shoulders, when used in the top lift, shall not exceed 50 percent of the total combined aggregate by weight.

Hydrated lime shall be used in all asphalt at the rate of one percent (1%) by weight of the total dry aggregate including aggregate in RAP, if used. The aggregate, prior to the addition of the hydrated lime, shall contain sufficient surface moisture. If necessary, the Contractor shall add moisture to the aggregate according to the procedures set out in Subsection 907-401.03.2.1.2.

The Contractor shall obtain a shipping ticket for each shipment of hydrated lime. The Contractor shall provide the District Materials Engineer with a copy of each shipping ticket from the supplier, including the date, time and weight of hydrated lime shipped and used in hot mix asphalt production. An amount equal to twenty-five percent (25%) of the total value of asphalt items performed during the initial estimate period in which the Contractor fails to submit the hydrated lime shipping tickets to the District Materials Engineer will be withheld from the Contractor's earned work. Non-conformance with this specification for successive estimate period(s) will result in the total value (100%) of asphalt items performed during this period(s) being withheld from the Contractor's earned work. Monies withheld for this non-conformance will be released for payment on the next monthly estimate following the date the submittal of hydrated lime shipping tickets to the District Materials Engineer is brought back into compliance with this specification.

Mixtures will require the addition of an antistripping agent when the Tensile Strength Ratio (MT-63) and/or the Boiling Water Test (MT-59) fail to meet the following criteria.

Tensile Strength Ratio (TSR - MT-63)

Wet Strength / Dry Strength 85 percent minimum

Interior Face Coating 95 percent minimum

Boiling Water Test (MT-59)

Particle Coating 95 percent minimum

Reclaimed asphalt pavement (RAP) materials may be used in the production of asphalt in the percentages of the total mix by weight set out in the following table:

Asphalt Mixture	Maximum Percentage of RAP by total weight of mix
4.75-mm	0
9.5-mm	20 *
12.5-mm Surface Lift	20 *
12.5-mm Underlying Lift	30
19-mm	30
25-mm	30

- * At a minimum, RAP shall be processed and/or screened such that the RAP material size does not exceed the nominal maximum sieve size for the mixture specified.

During asphalt production, the RAP shall pass through a maximum 2-inch square sieve located in the asphalt plant after the RAP cold feed bin and prior to the RAP weighing system.

Crushed reclaimed concrete pavement may be used as an aggregate component of all asphalt pavements. When crushed reclaimed concrete pavement is used as an aggregate component, controls shall be implemented to prevent segregation. Crushed reclaimed concrete pavement aggregate shall be separated into coarse and fine aggregate stockpiles using the 3/8-inch or 1/2-inch sieve as a break-point unless otherwise approved by the Engineer in writing.

907-401.02.3.1.1--Mixture Properties.

<u>ALL MIXTURES</u>	<u>Percent of Maximum Specific Gravity (Gmm)</u>
N _{Design}	96.0
N _{Initial}	Less than 90.0
N _{Maximum}	Less than 98.0
<u>VMA CRITERIA</u>	<u>Minimum percent</u>
25-mm mixture	12.0
19-mm mixture	13.0
12.5-mm mixture	14.0
9.5-mm mixture	15.0
4.75-mm mixture	16.0

Mixtures with VMA more than two percent higher than the minimum may be susceptible to

flushing and rutting; therefore, unless satisfactory experience with high VMA mixtures is available, mixtures with VMA greater than two percent above the minimum should be avoided.

The specified VFA range for 4.75-mm nominal maximum size mixtures for design traffic levels >3 million ESAL's (HT Mixtures) shall be 75 to 78 percent, for design traffic levels of 1.0 to 3 million ESAL's (MT mixtures) 65 to 78 percent, and for design traffic levels of <1.0 million ESAL's (ST mixtures) 65 to 78 percent.

DUST/BINDER RATIO for 4.75-mm mixtures

Percent Passing No.200 / Effective Binder Percent 0.9 to 2.0

DUST/BINDER RATIO for 9.5-mm, 12.5-mm, 19-mm & 25-mm mixtures

Percent Passing No.200 / Effective Binder Percent 0.8 to 1.6

907-401.02.3.2--Job Mix Formula. The job mix formula shall be established in accordance with Mississippi Test Method: MT-78, where N represents the number of revolutions of the gyratory compactor.

Compaction Requirements:	N _{Initial}	N _{Design}	N _{Maximum}
High Type (HT) Mixtures			
19-mm, 12.5-mm, 9.5-mm & 4.75-mm	7	85	130
Medium Type (MT) Mixtures			
19-mm, 12.5-mm, 9.5-mm & 4.75-mm	7	65	100
All Standard Type (ST) Mixtures;			
25-mm HT & MT Mixtures	6	50	75

At least 10 working days prior to the proposed use of each mixture, the Contractor shall submit in writing to the Engineer a proposed job-mix formula or request the transfer of a verified job-mix formula as set forth in the latest edition of MDOT's Field Manual for HMA and SOP TMD-11-78-00-000. The proposed job-mix formula shall indicate whether the mixture will be produced as HMA or WMA. The process or product used to produce WMA should also be noted on the proposed documentation for the job-mix formula. The job-mix formula shall be signed by a Certified Mixture Design Technician (CMDT).

The Department will perform the tests necessary for review of a proposed job-mix formula for each required mixture free of charge one time only. A charge will be made for additional job-mix formulas submitted by the Contractor for review.

Review of the proposed job-mix formula will be based on percent maximum specific gravity at N_{Initial}, N_{Design}, and N_{Maximum}, VMA @ N_{Design}, resistance to stripping, and other criteria specified for the mixture.

The mixture shall conform thereto within the range of tolerances specified for the particular

mixture. No change in properties or proportion of any component of the job-mix formula shall be made without permission of the Engineer. The job-mix formula for each mixture shall be in effect until revised in writing by the Engineer.

A job-mix formula may be transferred to other contracts in accordance with conditions set forth in the Department's Field Manual for HMA.

The Contractor shall not place any asphalt prior to receiving "tentative" approval and a MDOT design number from the Central Laboratory.

When a change in source of materials, unsatisfactory mixture production results (such as segregation, bleeding, shoving, rutting over $\frac{1}{8}$ ", raveling & cracking) or changed conditions make it necessary, a new job-mix formula will be required. The conditions set out herein for the original job-mix formula are applicable to the new job-mix formula.

In the event the Contractor wishes to change from an approved HMA job-mix formula to WMA or an approved WMA job-mix formula to HMA, the Contractor shall submit the proposed change in writing to the Engineer at least 10 working days prior to the proposed change. If no changes (other than the plant production temperature) are to be made to the job-mix formula, a new MDOT design number will be assigned by the MDOT Central Laboratory.

907-401.02.4--Substitution of Mixture. The substitution of a one (1) size finer mixture for an underlying lift shall require written permission of the State Construction Engineer, except no substitution of a 4.75-mm mixture will be allowed. A 9.5-mm mixture may be substituted for the 12.5-mm mixture designated on the plans as the top lift or pre-leveling. The 19-mm mixture may be substituted for the 25-mm mixture in trench widening work. Any substitution of mixtures shall be of the same type. No other substitutions will be allowed. The quantity of substituted mixture shall be measured and paid for at the contract unit price for the mixture designated on the plans. The substitution of any mixture will be contingent on meeting the required total structure thickness and maintaining the minimum and/or maximum laying thickness for the particular substituted mixture as set out in the following table.

Mixture	Single Lift Laying Thickness Inches	
	Minimum	Maximum
25-mm	3	4
19-mm	2 $\frac{1}{4}$	3 $\frac{1}{2}$
12.5-mm	1 $\frac{1}{2}$	2 $\frac{1}{2}$
9.5-mm	1	1 $\frac{1}{2}$
4.75-mm	$\frac{1}{2}$	$\frac{3}{4}$

907-401.02.5--Contractor's Quality Management Program.

907-401.02.5.1--General. The Contractor shall have full responsibility for quality management

and maintain a quality control system that will furnish reasonable assurance that the mixtures and all component materials incorporated in the work conform to contract requirements. The Contractor shall have responsibility for the initial determination and all subsequent adjustments in proportioning materials used to produce the specified mixture. Adjustments to plant operation and spreading and compaction procedures shall be made immediately when results indicate that they are necessary. Mixture produced by the Contractor without the required testing or personnel on the project shall be subject to removal and replacement by the Contractor at no additional cost to the State.

907-401.02.5.2--Personnel Requirements. The Contractor shall provide at least one Certified Asphalt Technician-I (CAT-I) full-time during asphalt production at each plant site used to furnish material to the project. Sampling shall be conducted by a certified technician or by plant personnel under the direct observation of a certified technician. All testing, data analysis and data posting will be performed by the CAT-I or by an assistant under the direct supervision of the CAT-I. The Contractor shall have a Certified Asphalt Technician-II (CAT-II) available to make any necessary process adjustments. Technician certification shall be in accordance with MDOT SOP TMD-22-10-00-000, MDOT HMA Technician Certification Program. An organizational chart, including names, telephone numbers and current certification, of all those responsible for the quality control program shall be posted in the Contractor's laboratory while the asphaltic paving work is in progress.

907-401.02.5.3--Testing Requirements. As a minimum, the Contractor's quality management program shall include the following:

- (a) Bituminous Material. Provide Engineer with samples in a sealed one quart metal container at the frequency given in MDOT SOP TMD-20-04-00-000.
- (b) Mechanically Fractured Face. Determine mechanically fractured face content of aggregates retained on the No. 4 sieve, at a minimum of one test per day of production.
- (c) Mixture Gradation. Conduct extraction tests for gradation determination on the mixture. Sample according to the frequency in paragraph (i) and test according to Mississippi Test Method MT-31.
- (d) Total Voids and VMA. Determine total voids and voids in mineral aggregate (VMA), at N_{Design} , from the results of bulk specific gravity tests on laboratory compacted specimens. Sample according to the sampling frequency in paragraph (i) and test according to the latest edition of MDOT's Field Manual for HMA.
- (e) Asphalt Content. Sample according to the sampling frequency in paragraph (i). Determine the asphalt content using one of the following procedures.
 - (1) Nuclear gauge per Mississippi Test Method MT-6.
 - (2) Incinerator oven per AASHTO Designation: T 308, Method A.
- (f) Stripping Tests. Conduct a minimum of one stripping test at the beginning of each job-

mix production and thereafter, at least once per each two weeks of production according to Mississippi Test Method: MT-63 and one stripping test per day of production according to Mississippi Test Method: MT-59. Should either the TSR (MT-63) or the boiling water (MT-59) stripping tests fail, a new antistrip additive or rate shall be established or other changes made immediately that will result in a mixture which conforms to the specifications; otherwise, production shall be suspended until corrections are made.

- (g) Density Tests. For 25-mm, 19.5-mm, 12.5-mm & 9.5-mm mixtures, conduct density tests as necessary to control and maintain required compaction according to Mississippi Test Method: MT-16, Method C (nuclear gauge), or AASHTO Designation: T 166. Note - The nuclear gauge may be correlated, at the Contractor's option, with the average of a minimum of five pavement sample densities. For 4.75-mm mixtures, conduct density tests as necessary to control and maintain required compaction according to AASHTO Designation: T 166.
- (h) Quality Control Charts. Plot the individual test data, the average of the last four tests and the control limits for the following items as a minimum:

Mixture Gradation (Percent Passing) Sieves:
 1/2-inch, 3/8-inch, No. 8, No. 16, No. 30 and No. 200.
 Asphalt Content, Percent
 Maximum Specific Gravity, G_{mm}
 Total Voids @ N_{Design} , Percent
 VMA @ N_{Design} , Percent

NOTE: For 4.75-mm mixtures, Quality Control Charts for mixture gradation are not required on the No. 8 and No. 30 sieves. For 4.75-mm mixtures, as a minimum, Quality Control Charts for mixture gradation shall be kept on the 3/8-inch, No. 16 and No. 200 sieves. For all mixtures other than 4.75-mm, Quality Control Charts for mixture gradation are not required on the No. 16 sieve.

Keep charts up-to-date and posted in a readily observable location. Charts may be kept on a computer, however, the charts shall be printed out a minimum of once each production day and displayed in the laboratory. Note any process changes or adjustments on the Air Voids chart.

- (i) Sampling Frequency. Conduct those tests as required above at the following frequency for each mixture produced based on the estimated plant tonnage at the beginning of the day.

<u>Total Estimated Production, tons</u>	<u>Number of Tests</u>
50-800	1
801-1700	2
1701-2700	3
2701+	4

NOTE: Material placed in a storage silo from a previous day's production shall be randomly sampled and tested when removed for placement on the roadway. Such sample(s) shall be independent of the day's production sampling frequency and shall be used in calculating the four (4) sample running average.

- (j) Sample Requirements. Obtain the asphalt mixture samples from trucks at the plant. Obtain aggregate samples from cold feed bins or aggregate stockpile. Save a split portion of all mixture samples at the laboratory site in a dry and protected location for 14 calendar days. At the completion of the project, the remaining samples may be disposed of with the approval of the Engineer.

The above testing frequencies are for the estimated plant production for the day. If production is discontinued or interrupted, the tests will be conducted at the previously established sample tonnage points for the materials that are actually produced. If the production exceeds the estimated tonnage, sampling and testing will continue at the testing increments previously established for the day. A testing increment is defined as the estimated daily tonnage divided by the required number of tests from the table in Subsection 907-401.02.5.3 paragraph (i).

In addition to the above program, the following tests shall be conducted on the first day of production and once for every eight production samples thereafter, with a minimum of one test per production week.

Aggregate Stockpile Gradations per AASHTO Designations: T-11 and T-27.

Reclaimed Asphalt Pavement (RAP) Gradation per Mississippi Test Method MT-31.

Fine Aggregate Angularity for all 4.75-mm and 9.5-mm mixtures and all MT and HT mixtures designed above the maximum density line per ASTM Designation: C 1252, Method A.

Testing of the aggregate and RAP stockpiles during production will be waived provided the Contractor provides the Engineer with gradation test results for the materials in the stockpile determined during the building of the stockpiles. The test results provided shall represent a minimum frequency of one per one thousand tons of material in the stockpile. If the Contractor continues to add materials to the stockpile during asphalt production, the requirements for gradation testing during production are not waived.

907-401.02.5.4--Documentation. The Contractor shall document all observations, records of inspection, adjustments to the mixture, and test results on a daily basis. All tests conducted by the Contractor in accordance with Subsection 907-401.02.5.3(h) shall be included in the running average calculations. If single tests are performed as a check on individual asphalt properties, between regular samples, without performing all tests required in Subsection 907-401.02.5.3(h), the results of those individual tests shall not be included in the running average calculations for that particular property. The Contractor shall record the results of observations and records of inspection as they occur in a permanent field record. The Contractor shall record all process

adjustments and job mix formula (JMF) changes on the air void charts. The Contractor shall provide copies of all test data sheets and the daily summary reports on the appropriate Mississippi DOT forms to the Engineer on a daily basis. The Contractor shall provide a written description of any process change, including blend proportions, to the Engineer as they occur. Information provided to the Engineer must be received in the Engineer's office by no later than 9:00 AM the day after the asphalt is produced. Fourteen days after the completion of the placement of the asphalt, the Contractor shall provide the Engineer with the original testing records and control charts in a neat and orderly manner.

907-401.02.5.5--Control Limits. The following control limits for the job mix formula (JMF) and warning limits are based on a running average of the last four data points.

<u>Item</u>	<u>JMF Limits</u>	<u>Warning Limits</u>
Sieve - % Passing		
1/2-inch	± 5.5	± 4.0
3/8-inch	± 5.5	± 4.0
No. 8	± 5.0	± 4.0
No. 16, for 4.75-mm mixtures ONLY	± 4.0	± 3.0
No. 30	± 4.0	± 3.0
No. 200	± 1.5	± 1.0
Asphalt Content, %	-0.3 to +0.5	-0.2 to + 0.4
Total Voids @ N _{Design} , %	± 1.3	± 1.0
VMA @ N _{Design} , %	- 1.5	- 1.0

907-401.02.5.6--Warning Bands. Warning bands are defined as the area between the JMF limits and the warning limits.

907-401.02.5.7--Job Mix Formula Adjustments. A request for a JMF adjustment signed by a CAT-II may be made to the Engineer by the Contractor. Submit sufficient testing data with the request to justify the change. The requested change will be reviewed by the State Materials Engineer for the Department. If current production values meet the mixture design requirements, a revised JMF will be issued. Adjustments to the JMF shall conform to the latest edition of MDOT's Field Manual for HMA. Adjustments to the JMF to conform to actual production shall not exceed the tolerances specified for the JMF limits. Regardless of such tolerances, any adjusted JMF gradation shall be within the design master range for the mixture specified. The JMF asphalt content may only be reduced if the production VMA meets or exceeds the minimum design VMA requirements for the mixture being produced.

907-401.02.5.8--Actions and Adjustments. Based on the process control test results for any property in question, the following actions shall be taken or adjustments made when appropriate:

- (a) When the running average trends toward the warning limits, the Contractor shall consider taking corrective action. The corrective action, if any, shall be documented. All tests shall be part of the contract files and shall be included in the running average

calculations.

- (b) The Contractor shall notify the Engineer whenever the running average exceeds the warning limits.
- (c) If two consecutive running averages exceed the warning limit, the Contractor shall stop production and make adjustments. Production shall only be restarted after notifying the Engineer of the adjustments made.
- (d) If the adjustment made under (c) improves the process such that the running average after four additional tests is within the warning limits, the Contractor may continue production with no reduction in payment.
- (e) If the adjustment made under (c) does not improve the process and the running average after four additional tests stays in the warning band, the mixture will be considered unsatisfactory. Reduced payment for unsatisfactory mixtures will be applied starting from the stop point to the point when the running average is back within the warning limits in accordance with Subsection 907-401.02.6.3.
- (f) Failure to stop production and make adjustments when required shall subject all mixture produced from the stop point to the point when the running average is back within the warning limits to be considered unsatisfactory. Reduced payment for unsatisfactory mixtures will be applied in accordance with Subsection 907-401.02.6.3.
- (g) If the running average exceeds the JMF limits, the Contractor shall stop production and make adjustments. Production shall only be restarted after notifying the Engineer of the adjustments made.
- (h) All materials for which the running average exceeds the JMF limits will be considered unacceptable and shall be removed and replaced by the Contractor at no additional cost to the State. The Engineer will determine the quantity of material to be replaced based on a review of the individual testing data which make up the running average in question and an inspection of the completed pavement. If the Engineer decides to leave the mixture in place because of special circumstances, the quantity of mixture, as defined above, will be paid for in accordance with Subsection 907-401.02.6.3.
- (i) Single test results shall be compared to 1.7 times the warning and JMF limits. If the test results verified by QA testing (within allowable differences in Subsection 907-401.02.6.2) exceed these limits, the pay factor provided in Subsection 907-401.02.6.3 will apply for the quantity of material represented by the test(s). Single test limits will be used for the acceptance of projects when insufficient tonnage is produced to require four (4) Contractor's tests.
- (j) The above corrective action will also apply for a mixture when the Contractor's testing data has been proven incorrect. The Contractor's data will be considered incorrect when;
1) the Contractor's tests and the Engineer's tests do not agree within the allowable differences given in Subsection 907-401.02.6.2 and the difference can not be resolved, or
2) the Engineer's tests indicates that production is outside the JMF limits and the results have been verified by the Materials Division. The Engineer's data will be used in place of the Contractor's data to determine the appropriate pay factor.

907-401.02.6--Standards of Acceptance.

907-401.02.6.1--General. Acceptance for mixture quality (VMA and total voids @ N_{Design} , gradation, and asphalt content) will be based on random samples tested in accordance with the

latest edition of MDOT's Field Manual for HMA. Pavement densities and smoothness will be accepted by lots as set out in Subsections 907-401.02.6.4 and 907-401.02.6.5.

907-401.02.6.2--Assurance Program for Mixture Quality. The Engineer will conduct a quality assurance program. The quality assurance program will be accomplished as follows:

- 1) Conducting verification tests.
- 2) Validate Contractor test results.
- 3) Periodically observing Contractor quality control sampling and testing.
- 4) Monitoring required quality control charts and test results.
- 5) Sampling and testing materials at any time and at any point in the production or laydown process.

The rounding of all test results will be in accordance with Subsection 700.04.

The Engineer will conduct verification tests on samples taken by the Contractor under the direct supervision of the Engineer at a time specified by the Engineer. The frequency will be equal to or greater than ten percent (10%) of the tests required for Contractor quality control and the data will be provided to the Contractor within two asphalt mixture production days after the sample has been obtained by the Engineer. At least one sample shall be tested from the first two days of production. All testing and data analysis shall be performed by a Certified Asphalt Technician-I (CAT-I) or by an assistant under the direct supervision of the CAT-I. Certification shall be in accordance with the *MDOT HMA Technician Certification Program* chapter in the Materials Division Inspection, Testing, and Certification Manual. The Department shall post a chart giving the names and telephone numbers for the personnel responsible for the assurance program.

The Engineer shall be allowed to inspect Contractor testing equipment and equipment calibration records to confirm both calibration and condition. The Contractor shall calibrate and correlate all testing equipment in accordance with the latest versions of the Department's Test Methods and AASHTO Designation: R 18.

Random differences between the Engineer's verification tests and the current running average of four quality control tests at the time of obtaining the verification sample will be considered acceptable if within the following limits:

Item	Allowable Differences
Sieve - % Passing	
3/8-inch and above	6.0
No. 4	5.0
No. 8	4.0
No. 16, for 4.75-mm mixtures ONLY	3.5
No. 30	3.5
No. 200	2.0
AC Content	0.4
Specimen Bulk SG, Gmb @ N_{Design}	0.030
Maximum SG, Gmm	0.020

If four quality control tests have not been tested prior to the time of the first verification test, the verification test results will be compared to the average of the preceding quality control tests. If the verification test is the first material tested on the project or if a significant process adjustment was made just prior to the verification test, the verification test results will be compared to the average of four subsequent quality control test results. For all other cases after a significant process adjustment, the verification test results will be compared to the average of the preceding quality control tests (taken after the adjustment) as in the case of a new project start-up when four quality control tests are not available.

In the event that; 1) the comparison of the Contractor's running average quality control data and Engineer's quality assurance verification test results are outside the allowable differences in the above table, or 2) if a bias exists between the results, such that one of the results is predominately higher or lower than the other, and the Engineer's results fail to meet the JMF control limits, the Engineer will investigate the reason immediately. As soon as the need for an investigation becomes known, the Engineer will increase the quality assurance sampling rate to the same frequency required for Contractor testing. The additional samples obtained by the Engineer may be used as part of the investigation process or for routine quality assurance verification tests. The Engineer's investigation may include testing of the remaining quality control split samples, review and observation of the Contractor's testing procedures and equipment, and a comparison of split sample test results by the Contractor quality control laboratory, Department quality assurance laboratory and the Materials Division laboratory. The procedures outlined in the latest edition of MDOT's Field Manual for HMA may be used as a guide for the investigation. In the event that the Contractor's results are determined to be incorrect, the Engineer's results will be used for the quality control data and the appropriate payment for the mixture will be based on the procedures specified in Subsection 907-401.02.5.8(j).

The Engineer will periodically witness the sampling and testing being performed by the Contractor. The Engineer, both verbally and in writing, will promptly notify the Contractor of any observed deficiencies. When differences exist between the Contractor and the Engineer which cannot be resolved, a decision will be made by the State Materials Engineer, acting as the referee. The Contractor will be promptly notified in writing of the decision. If the deficiencies are not corrected,

the Engineer will stop production until corrective action is taken.

907-401.02.6.3--Acceptance Procedure for Mixture Quality. All obviously defective material or mixture will be subject to rejection by the Engineer. Such defective material or mixture shall not be incorporated into the finished work. If the defective material has already been placed in the work, the material shall be removed and replaced at no additional cost to the State.

The Engineer will base final acceptance of the asphalt mixture production on the results of the Contractor's testing for total voids and VMA @ N_{Design} , gradation, and asphalt content as verified by the Engineer in the manner hereinbefore described and the uniformity and condition of the completed pavement. Areas of pavement that exhibit non-uniformity or failures, materials or construction related, such as but not limited to segregation, bleeding, shoving, rutting over $\frac{1}{8}$ ", raveling, slippage, or cracking will not be accepted. Such areas will be removed and replaced at no additional cost to the State.

Bituminous mixture placed prior to correction for deficiencies in VMA and total voids @ N_{Design} , gradation, or asphalt content, as required in Subsection 907-401.02.5.8 and determined by the Engineer satisfactory to remain in place will be paid for in accordance with the following pay factors times the contract unit price per ton.

Pay Factor for Mixture Quality *

Item	Produced in Warning Bands	Produced Outside JMF Limits, Allowed to Remain in Place
Gradation	0.90	0.75
Asphalt Content	0.85	0.75
Total Voids @ N_{Design}	0.70	0.50
VMA @ N_{Design}	0.90	0.75

* The minimum single payment will apply.

907-401.02.6.4--Acceptance Procedure for Density. Each completed lift will be accepted with respect to compaction on a lot to lot basis from density tests performed by the Department. For normal production days, divide the production into approximately equal lots as shown in the following table. When cores are being used for the compaction evaluation, randomly obtain one core from each lot. When the nuclear density gauge is being used for compaction evaluation, obtain two random readings from each lot and average the results. See Chapter 7 of the latest edition of MDOT's Field Manual for HMA for more details. Additional tests may be required by the Engineer to determine acceptance of work appearing deficient. The Contractor shall furnish and maintain traffic control for all compaction evaluations, including coring, required in satisfying specified density requirements.

Lot Determination

<u>Daily Production - Tons</u>	<u>Number of Lots</u>
0 - 300	1
301 - 600	2
601 - 1000	3
1001 - 1500	4
1501 - 2100	5
2101 - 2800	6
2801+	7

907-401.02.6.4.1--Roadway Density. The density requirement for each completed lift on a lot to lot basis from density tests performed by the Department shall be as follows:

1. For all leveling lifts, when full lane width and with a thickness as specified in the table in Subsection 907-401.02.4, the required lot density shall be 92.0 percent of maximum density.
2. For all single lift overlays, with or without leveling and/or milling, the required lot density shall be 92.0 percent of maximum density.
3. For all multiple lift overlays of two (2) or more lifts excluding leveling lifts, the required lot density of the bottom lift shall be 92.0 percent of maximum density. The required lot density for all subsequent lifts shall be 93.0 percent of maximum density.
4. For all pavements on new construction, the required lot density for all lifts shall be 93.0 percent of maximum density.

When it is determined that the density for a lot is below the required density (93.0 percent or 92.0 percent) but not lower than 91.0 or 90.0 percent of maximum density, respectively, the Contractor will have the right to remove and replace the lot(s) not meeting the specified density requirements in lieu of accepting reduced payment for the lot(s).

When it is determined that the density for a lot is above 96.0 percent, the Engineer shall notify the Contractor who will make plant adjustments to resolve the problem.

When it is determined that the density for a lot is below 91.0 or 90.0 percent, respectively, the lot(s), or portions thereof shall be removed and replaced in accordance with Chapter 7 of the latest edition of MDOT's Field Manual for HMA at no additional cost to the State. A corrected lot will be retested for approval. No resampling will be performed when pavement samples are used for determining density.

At any time the average daily compaction (the total of the percent compaction for the lots produced in one day divided by the total number of lots for the day) does not meet the required percent compaction or more for two consecutive days, the Contractor shall notify the Engineer of proposed changes to the compactive effort. If the average daily compaction does not meet the

required percent compaction or more for a third consecutive day, the Contractor shall stop production until compaction procedures are established to meet the specified density requirements.

Each lot of work found not to meet the density requirement of 92.0% or 93% of maximum density, respectively, may remain in place with a reduction in payment as set out in the following tables:

**PAYMENT SCHEDULE FOR COMPACTION
OF 92.0 PERCENT OF MAXIMUM DENSITY**

<u>Pay Factor</u>	<u>Lot Density ** % of Maximum Density</u>
1.00	92.0 and above
0.90	91.0 - 91.9
0.70	90.0 - 90.9

** Any lot or portion thereof with a density of less than 90.0 percent of maximum density shall be removed and replaced at no additional cost to the State.

**PAYMENT SCHEDULE FOR COMPACTION
OF 93.0 PERCENT OF MAXIMUM DENSITY**

<u>Pay Factor</u>	<u>Lot Density *** % of Maximum Density</u>
1.00	93.0 and above
0.90	92.0 - 92.9
0.70	91.0 - 91.9

*** Any lot or portion thereof with a density of less than 91.0 percent of maximum density shall be removed and replaced at no additional cost to the State.

The compaction pay factors and mixture quality pay factor, as described in Subsection 907-401.02.6.3, will each apply separately. However, the combined pay factor shall not be less than 0.50 for any mixture allowed to remain in place.

907-401.02.6.4.2--Trench Widening Density. The density for trench widening on a lot to lot basis shall be determined from density tests performed by the Department using pavement samples (cores).

When it is determined that the density for a trench widening lot is below 89.0 percent but not lower than 88.0 percent of maximum density, the Contractor will have the right to remove and replace the lot(s) not meeting the specified density requirements in lieu of accepting reduced payment for the lot(s).

When it is determined that the density for a trench widening lot is above 95.0 percent, the Engineer shall notify the Contractor who will make plant adjustments to resolve the problem.

When it is determined that the density for a trench widening lot is below 88.0 percent, the lot(s), or portions thereof shall be removed and replaced in accordance with Chapter 7 of the latest edition of MDOT's Field Manual for HMA at no additional cost to the State. A corrected lot will be retested for approval. No resampling will be performed when pavement samples are used for determining density.

At any time the daily compaction (the total of the percent compaction for the lots produced in one day divided by the total number of lots for the day) does not meet 89.0 percent compaction or more for two consecutive days, the Contractor shall notify the Engineer of proposed changes to the compactive effort. If the average daily compaction does not meet 89.0 percent compaction or more for a third consecutive day, the Contractor shall stop production until compaction procedures are established to meet the specified density requirement.

Each lot of trench widening work found not to meet the density requirement of 91.0 percent of maximum density may remain in place with a reduction in payment as set out in the following table:

**PAYMENT SCHEDULE FOR COMPACTION
TRENCH WIDENING WORK**

<u>Pay Factor</u>	Lot Density *** <u>% of Maximum Density</u>
1.00	89.0 and above
0.50	88.0 - 88.9

*** Any lot or portion thereof with a density of less than 88.0 percent of maximum density shall be removed and replaced at no additional cost to the State.

The compaction pay factors and mixture quality pay factor, as described in Subsection 907-401.02.6.3, will each apply separately. However, the combined pay factor shall not be less than 0.50 for any mixture allowed to remain in place.

907-401.02.6.5--Blank.

907-401.02.6.6--Blank.

907-401.02.6.7--Surface Correction. Corrective work to sections exceeding short continuous interval thresholds reported by ProVal, as described in Subsection 907-403.03.2.1, shall consist of diamond grinding in accordance with these specifications or methods approved by the Engineer. All surface areas corrected by grinding shall be sealed with a sealant approved by the Engineer.

907-401.02.6.7.1--Diamond Grinding. Grinding of asphalt surfaces shall consist of diamond

grinding the existing asphalt pavement surface to remove surface distortions to achieve the specified surface smoothness requirements.

907-401.02.6.7.2--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture pavement surfaces with diamond blades. The effective wheel base of the machine shall not be less than 12.0 feet. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 3.0 feet forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least two feet (2') wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at joints, or other locations.

907-401.02.6.7.3--Construction. The construction operation shall be scheduled and proceed in a manner that produces a uniform finish surface. Grinding will be accomplished in a manner to provide positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane.

The operation shall result in pavement that conforms to the typical cross-section and the requirements specified in Subsection 907-401.02.6.7.4. It is the intent of this specification that the surface smoothness characteristics be within the limits specified.

The Contractor shall establish positive means for removal of grinding residue. Solid residue shall be removed from pavement surfaces before it is blown by traffic action or wind. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities, but may be allowed to flow into adjacent ditches.

907-401.02.6.7.4--Finished Pavement Surface. The grinding process shall produce a pavement surface that is smooth and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall not be more than 1/16 inch higher than the bottoms of the grooves.

The finished pavement surface will be measured for riding quality. The grinding shall produce a riding surface which does not exceed either the specified profile index or the specified bump and dip limit.

907-401.02.6.8--Acceptance Procedure for Pavement Smoothness Using Mean Roughness Index (MRI). When compaction is completed, the lift shall have a uniform surface and be in reasonably close conformity with the line, grade and cross section shown on the plans.

The smoothness of the surface lift will be determined by using an Inertial Profiling System (IPS) to measure and record roughness data in each designated location. Roughness data for each longitudinal profile will be reported as a Mean Roughness Index (MRI). MRI is calculated by

averaging the International Roughness Index (IRI) values from the two individual wheelpath profiles. The surface shall be tested and corrected to a smoothness index as described herein with the exception of those locations or specific projects that are excluded from smoothness testing with an IPS.

The smoothness of the surface lift will be determined for traffic lanes, auxiliary lanes, climbing lane and two-way turn lanes. Areas excluded from a smoothness test with the IPS are acceleration and deceleration lanes, tapered sections, transition sections for width, shoulders, crossovers, ramps, side street returns, etc. The roadway pavement on bridge replacement projects having 1,000 feet or less of pavement on each side of the structure will be excluded from a smoothness test. Pavement on horizontal curves having a radius of less than 1,000 feet at the centerline and pavement within the super elevation transition of such curves are excluded from smoothness testing. Smoothness testing shall terminate 264 feet from each transverse joint that separates the pavement from a bridge deck, bridge approach slab or existing pavement not constructed under the contract. This shall apply to any other exceptions including, but not limited to, railroad crossings and manholes. Segments containing a considerable amount of encroachments such as intersections, manholes, curb and gutter sections, etc. may be excluded at the Project Engineer's discretion.

Initial smoothness measurements shall take place no more than 72 hours following placement of surface and must be performed at the posted speed limit or 50 miles per hour (± 5 mile per hour), whichever is lower. This speed requirement will be waived for all lightweight profilers. Measurements will be made in both wheel paths of exterior and interior lanes. The wheel paths shall be designated as being located three feet (3') and nine feet (9') from centerline or longitudinal joint, respectively. Beginning and ending latitude and longitude coordinates shall be required on each smoothness surface test. Testing will also be required on sections that have been surface corrected. No smoothness testing shall be performed when there is moisture of any kind on the pavement surface. Any additional testing shall meet the requirements of Subsection 907-403.03.2.

The surface lift will be accepted on a continuous interval basis for pavement smoothness. Continuous reporting is based upon all MRI values for a specified running interval. These values are averaged and presented at the midpoint of the specified running interval. The last 15 feet of a day's lift may not be obtainable until the lift is continued and for this reason may be included in the subsequent section.

Areas of localized roughness exceeding the continuous 25-foot interval threshold described in Subsection 907-403.03.2.1 shall be corrected regardless of the 528-foot interval MRI value of the section. Surface correction by grinding shall be performed in accordance with Subsection 907-401.02.6.7. The Contractor shall also make other necessary surface corrections to ensure that the final mean roughness index of the section meets the requirements of Subsection 907-403.03.2.

Continuous sections exceeding the accepted long interval MRI value shall be corrected as specified in Subsection 403.03.4. All such corrections shall be performed at no additional costs to the State. Scheduling and traffic control will be the responsibility of the Contractor with

approval of the Engineer. All tests and corrections shall be in accordance with AASHTO R 54-10, Accepting Pavement Ride Quality When Measured Using Inertial Profiling Systems.

907-401.02.6.9--High Speed Inertial Profiling System.

907-401.02.6.9.1--General. The IPS, furnished and operated by the Contractor under the supervision of the Engineer or the Engineer's representative, shall be a dual laser high speed or lightweight vehicle meeting the requirements of AASHTO M 328-10, Standard Specification for Inertial Profiler.

907-401.02.6.9.2--Mechanical Requirements. The IPS should function independent of vehicle suspension and speed with an operational range of 15-70 mph (for high speed profilers only) and must collect data at a sample interval of no more than three inches (3"). All IPSs, operators, and combinations thereof shall be verified in accordance with AASHTO R 56-10, Standard Practice for Certification of Inertial Profiler Systems and AASHTO R 57-10, Operating Inertial Profiler Systems.

907-401.02.6.9.3--Computer Requirements. The computer measurement program must be menu driven, Windows compatible, and able to produce unfiltered profiler runs in any one of the following file formats: University of Michigan's Transportation Research Institute's (UMTRI) Engineering Research Division (*.erd) file, ProVAL's Pavement Profile (*.ppf) file, or Ames Engineering's (*.adf) file format. The computer shall have the ability to display and print data on site for verification and shall have the ability to save and transfer data via Universal Serial Bus (USB) flash drive, which shall be provided by the Contractor.

All profiler runs must be named in the following format for acceptance by the Project Engineer:

- County_Route_Direction_Lane_BeginStation_EndStation

In addition to manufacturers software; the latest version of FHWA's ProVAL software shall be installed on the IPS computer. ProVAL software is available for free download at <http://www.roadprofile.com>.

907-401.02.7--Nuclear Gauges.

907-401.02.7.1--Nuclear Moisture-Density Gauge. The nuclear gauge unit used to monitor density shall contain a full data processor which holds all calibration constants necessary to compute and directly display wet density, moisture, and dry density in pounds per cubic foot. The data processor shall compute and display the percent moisture and percent density based on dry weight.

907-401.02.7.2--Nuclear Asphalt Content Gauge. The Contractor shall furnish and calibrate, unless designated otherwise in the contract, a Troxler Nuclear Asphalt Content Gauge Model 3241 or updated model, or a Campbell Nuclear Asphalt Content Gauge Model AC-2 or an approved equal.

907-401.03--Construction Requirements. Mississippi DOT has adopted the "Hot-Mix Asphalt

Paving Handbook” as the guideline for acceptable asphalt construction practices.

907-401.03.1--Specific Requirements.

907-401.03.1.1--Weather Limitations - General. The mixture shall not be placed when weather conditions prevent the proper handling and finishing or the surface on which it is to be placed is wet or frozen.

When paving operations are discontinued because of rain, the mixture in transit shall be protected until the rain ceases. The surface on which the mixture is to be placed shall be swept to remove as much moisture as possible and the mixture may then be placed subject to removal and replacement at no additional cost to the State if contract requirements are not met.

907-401.03.1.1.1--Weather Limitations For HMA. At the time of placement, the air and pavement surface temperature limitations shall be equal to or exceed that specified in the following table.

TEMPERATURE LIMITATIONS

Compacted Thickness	Temperature
Less than 1½ inches	55°F
1½ inches to 2 inches	50°F
2¼ inches to 3 inches	45°F
Greater than 3 inches	40°F

907-401.03.1.1.2--Weather Limitations For WMA. The air and pavement temperature at the time of placement shall equal or exceed 40°F, regardless of compacted lift thickness.

907-401.03.1.2--Tack Coat. Tack coat shall be applied to previously placed asphalt and between lifts, unless otherwise directed by the Engineer. Tack coat shall be applied with a distributor spray bar. A hand wand will only be allowed for applying tack coat on ramp pads, irregular shoulder areas, median crossovers, turnouts, or other irregular areas. Bituminous materials and application rates for tack coat shall be as specified in Table 410-A on page 293. Construction requirements shall be in accordance with Subsection 407.03 of the Standard Specifications.

907-401.03.1.3--Blank.

907-401.03.1.4--Density. The lot density for all dense graded pavement lifts, except as provided below for preleveling, wedging [less than fifty percent (50%) of width greater than minimum lift thickness], ramp pads, irregular shoulder areas, median crossovers, turnouts, or other areas where the established rolling pattern cannot be performed, shall not be less than the specified percent (92.0% or 93.0%) of the maximum density based on AASHTO Designation: T 209 for the day’s production. For all leveling lifts, when full lane width and with a thickness as specified in the table in Subsection 907-401.02.4, the required lot density shall be 92.0 percent of maximum

density. If a job-mix formula adjustment is made during the day which affects the maximum specific gravity, calculate a new average maximum density for the lot(s) placed after the change.

Pavement core samples obtained for determining density which has a thickness less than two times the maximum size aggregate permitted by the job-mix formula will not be used as a representative sample.

Preleveling, wedging (less than fifty percent of width greater than minimum lift thickness), ramp pads, irregular shoulder areas, median crossovers, turnouts, and other areas where an established rolling pattern cannot be obtained shall be compacted to refusal densification.

907-401.03.2--Bituminous Mixing Plants.

907-401.03.2.1--Plant Requirements.

907-401.03.2.1.1--Cold Aggregate Storage. The cold storage for hydrated lime shall be a separate bulk storage bin with a vane feeder or other approved feeder system which can readily be calibrated. The system shall provide a means for easy sampling of the hydrated lime additive and verifying the quantity of lime dispensed. The feeder system shall require a totalizer.

The hydrated lime additive equipment shall be interlocked and synchronized with the cold feed controls to operate concurrently with the cold feed operation which will automatically adjust the hydrated lime feed to variations in the cold aggregate feed. A positive signal system shall be installed which will automatically shut the plant down when malfunctions cause an improper supply of hydrated lime or water.

The plant shall not operate unless the entire hydrated lime system is functioning properly.

907-401.03.2.1.2--Cold Aggregate Feed. The hydrated lime shall be dispensed dry or as a slurry directly onto the composite aggregate between the cold feed and the dryer. The slurry shall consist of 1 part hydrated lime to 3 parts water.

When hydrated lime is introduced dry, a spray bar or other approved system capable of spraying all aggregate with water shall be installed in order to maintain all aggregate at the moisture condition set out in Subsection 907-401.02.3.1 prior to addition of the hydrated lime. An alternate system for spraying the coarse aggregate stockpiles may be allowed when approved by the Engineer. The approved equipment and methods shall consistently maintain the aggregate in a uniform, surface wet condition. The moisture content of the aggregate-hydrated lime mixture, following spraying and mixing, shall be introduced into the automatic moisture controls of the plant.

The aggregate-hydrated lime mixture shall be uniformly blended by some mechanical means such as a motorized "on the belt" mixer or pug mill located between the cold feed and the dryer. Other mixing devices may be used subject to approval by the Engineer.

A maximum of forty five (45) percent of the total aggregate blend may be fed through any single

cold feed bin. If the JMF calls for more than forty five (45) percent of a specific aggregate, that aggregate must be fed through two (2) or more separate cold feed bins.

907-401.03.2.1.3--Dryer. The efficiency of drying aggregates shall be such that the moisture content of the top asphalt mixture shall not exceed 0.50 percent by weight of the total mixture, and the moisture content of all the underlying mixtures shall not exceed 0.75 percent by weight of the total mixture being produced.

907-401.03.2.1.4--Blank.

907-401.03.2.1.5--Control of Bituminous Material and Antistripping Agent. Specified bituminous materials from different manufacturers or from different refineries of a single manufacturer shall not be mixed in the plant's asphalt cement supply system storage tank and used in the work without prior written approval of the Engineer. Approval is contingent upon the Engineer's receipt of three copies of the manufacturer's certified test report(s) from the Contractor showing that the bituminous material blend conforms to the specifications.

A satisfactory method of weighing or metering shall be provided to ensure the specified quantity of bituminous material. Provisions shall be provided for checking the quantity or rate of flow. Weighing or metering devices shall be accurate within plus or minus one-half percent.

The antistripping agent shall be injected into the bituminous material immediately prior to the mixing operation with an approved in-line injector system capable of being calibrated so as to ensure the prescribed dosage.

An in-line spigot for sampling of asphalt shall be located between the asphalt storage tank and the antistripping agent in-line injector.

907-401.03.2.1.6--Thermometric Equipment. An armored thermometer of adequate range and calibrated in 5°F increments shall be fixed at a suitable location in the bituminous line near the charging valve of the mixer unit.

The plant shall be equipped with an approved dial-scale, mercury-actuated thermometer, pyrometer or other approved thermometric instrument placed at the discharge chute of the dryer to measure the temperature of the material.

When the temperature control is unsatisfactory, the Engineer may require an approved temperature-recording apparatus for better regulation of the temperature.

907-401.03.2.1.7--Screens. A scalping screen shall be used.

907-401.03.2.1.8--Dust Collector. The plant shall be equipped with a dust collector constructed to waste or return collected material. When collected material is returned, it shall be returned through a controlling device which will provide a uniform flow of material into the aggregate mixture.

907-401.03.2.1.9--Safety Requirements. A platform or other suitable device shall be provided so the Engineer will have access to the truck bodies for sampling and mixture temperature data.

907-401.03.2.1.10--Blank.

907-401.03.2.1.11--Truck Scales. The specifications, tolerances and regulations for commercial weighing and measuring devices as recommended by the National Bureau of Standards [National Institute of Standards and Technology (NIST) Handbook 44] shall govern truck scales used in the State of Mississippi, except weighing devices with a capacity of ten thousand (10,000) pounds or more used to weigh road construction materials (i.e. sand, gravel, asphalt, fill dirt, topsoil and concrete) shall have a tolerance of one-half of one percent (1/2 of 1%) in lieu of the requirements of Handbook 44 and shall be regulated by the Mississippi Department of Transportation.

Scales shall be checked and certified by a scale company certified in heavy truck weights by the Mississippi Department of Agriculture and Commerce. In the case of scales used for measurement of materials on Department of Transportation projects, certification shall be performed in the presence of an authorized representative of the Department or a copy of the certification may be furnished for scales that have been checked and certified within the last six months for use on other Department of Transportation projects and are still in the position where previously tested. Scales that have not been checked and certified under NIST Handbook 44 guidelines, except for the herein modified tolerances allowed, shall be so checked and certified prior to use for measurement of materials on Department of Transportation projects. Tests shall be continued on six month intervals with the test conducted in the presence of an authorized representative of the Department.

Truck scales shall be accurate to one-half of one percent of the applied load, shall be sensitive to 20 pounds, and shall have a graduation of not more than 20 pounds.

The Contractor may use an electronic weighing system approved by the Engineer in lieu of truck scales. The system shall be equipped with an automatic print out system which will print a ticket for each load with the following information:

MDOT, Contractor's name, project number, county, ticket number, load number, pay item number, item description of the material delivered, date, time of day, haul vehicle number, gross weight, tare weight, net weight and total daily net weight.

When approved by the Engineer and materials are measured directly from a storage bin equipped with load cells, exceptions may be made to the gross and tare weight requirements.

The ticket shall also have a place for recording the temperature of asphalt mixtures, if applicable, and the signatures of MDOT's plant and roadway inspectors. The load numbers for each project shall begin with load number one (1) for the first load of the day and shall be numbered consecutively without a break until the last load of the day. The Contractor shall provide MDOT with an original and one copy of each ticket. When the ticket information provided by the Contractor proves to be unsatisfactory, MDOT will use imprinter(s) and imprinter tickets to

record load information. All recorded weights shall be in pounds and shall be accurate to within one-half of one percent of the true weight, and the system shall be sensitive to 20 pounds. The Engineer will require random loads to be checked on certified platform scales at no cost to the Department.

When an electronic weighing system utilizes the plant scales of a batch plant, the system may be used only in conjunction with a fully automatic batching and control system.

907-401.03.2.2--Additional Requirements for Batching Plants.

907-401.03.2.2.1--Plant Scales. The plant batch scale weight shall not exceed the platform scale weight by more than one percent (1.0%).

907-401.03.2.3--Additional Requirements for Drum Mixing Plants.

907-401.03.2.3.1--Plant Controls. The plant shall be operated with all the automatic controls as designed and provided by the plant manufacturer. If the automatic controls malfunction, brief periods of manual operations to complete the day's work or to protect the work already placed may be conducted with the approval of the Engineer. During manual operation, the Contractor must continue to produce a uniform mixture meeting all contract requirements.

907-401.03.2.3.2--Aggregate Handling and Proportioning. A screening unit shall be placed between the bins and the mixer to remove oversized aggregate, roots, clayballs, etc.

907-401.03.2.4--Surge or Storage Bins. Surge and/or storage systems may be used at the option of the Contractor provided each system is approved by the Department prior to use. Surge bins shall be emptied at the end of each day's operation. Storage silos may be used to store mixtures as follows:

19-mm & 25-mm mixtures	24 hours
9.5-mm & 12.5-mm mixtures	36 hours

The storage silos must be well sealed, completely heated and very well insulated. The mixture when removed from the storage silo shall be tested to ensure that it meets all the same specifications and requirements as the mixture delivered directly to the paving site. See Subsection 907-401.02.5.3, subparagraph (i) for sampling and testing requirements.

907-401.03.3--Hauling Equipment. The inside surfaces of each vehicle bed shall be coated with a light application of water and thin oil, soap solution, lime water solution or other approved material to prevent the mixture from sticking. Diesel fuel or gasoline shall not be used to lubricate vehicle beds. Truck beds shall be raised to drain excessive lubricants before placing mixture in the bed. An excess of lubricant will not be permitted.

907-401.03.4--Bituminous Pavers. The screed or strikeoff assembly shall be capable of vibrating and heating the full width of the mixture being placed and shall lay the lift with an automatic control device to the specified slope and grade without tearing, pulling or gouging the

mixture surface.

907-401.03.5--Rollers. All rollers shall be self-propelled units capable of maintaining a smooth and uniform forward and reverse speed as required for proper compaction. They shall be equipped with adjustable scrapers, water tanks, mats and a device for wetting the wheels or tires to prevent the mixture from sticking. Adhesion of the mixture to the rollers will not be permitted. The use of diesel fuel or gasoline for cleaning roller wheels or tires or to aid in preventing the mixture from sticking to the wheels or tires is prohibited.

All rollers shall be in good mechanical condition, free from leaking fuels and lubricants, loose link motion, faulty steering mechanism, worn king bolts and bearings. They shall be operational at slow speeds to avoid displacement of the mixture and capable of reversing direction smoothly and without backlash.

907-401.03.6--Preparation of Grade. The foundation upon which asphalt pavement is to be placed shall be prepared in accordance with the applicable Section of the Standard Specification.

Unless otherwise directed, tack coat shall be applied to the underlying surface on which the mixture is to be placed. Emulsions, if used, must be allowed to "break" prior to placement of the bituminous mixture.

Bituminous mixture shall not be placed against the edge of pavements, curbs, gutters, manholes and other structures until sprayed with a thin uniform tack coating. The tack coat shall be protected until the mixture has been placed.

Existing asphalt pavements that require preliminary leveling or patching in advance of placing the bituminous mixture shall be sprayed with a tack coat material and then brought as nearly as practicable to uniform grade and cross section. The material shall be placed by hand or machine in one or more compacted layers approximately two (2) inches or less in compacted thickness.

907-401.03.7--Blank.

907-401.03.8--Preparation of Mixture.

907-401.03.8.1--Preparation of Mixture For HMA. The temperature of the mixture, when discharged from the mixer, shall not exceed 340°F.

907-401.03.8.2--Preparation of Mixture For WMA. Warm mix asphalt is defined as a plant produced asphalt mixture that can be produced and constructed at lower temperatures than typical hot mix asphalt. Typical temperature ranges of non-polymer modified, WMA produced by foaming the asphalt binder at the plant are typically 270°F to 295°F at the point of discharge of the plant. Typical temperature ranges of polymer modified, WMA produced by foaming the asphalt binder at the plant are typically 280°F to 305°F at the point of discharge of the plant. WMA produced by addition of a terminal blended additive may allow the producer to reduce the temperatures below 270°F as long as all mixture quality and field density requirements are met. Production temperatures at the plant may need to be increased or decreased due to factors such as

material characteristics, environmental conditions, and haul time to achieve mixture temperatures at the time of compaction in which uniform mat density can be achieved.

907-401.03.9--Material Transfer Equipment. Excluding the areas mentioned below, the material transferred from the hauling unit when placing the top lift, or the top two (2) lifts of a multi-lift asphalt pavement with density requirements, shall be remixed prior to being placed in the paver hopper or insert by using an approved Materials Transfer Device. Information on approved devices can be obtained from the State Construction Engineer. Areas excluded from this requirement include: leveling courses, temporary work of short duration, detours, bridge replacement projects having less than 1,000 feet of pavement on each side of the structure, acceleration and deceleration lanes less than 1,000 feet in length, tapered sections, transition sections for width, shoulders less than 10 feet in width, crossovers, ramps, side street returns and other areas designated by the Engineer.

907-401.03.10--Spreading and Finishing. Grade control for asphalt pavements shall be established by stringline at least 500 feet ahead of spreading, unless placement is adjacent to curb and gutter, concrete pavement, or other allowed grade control.

The mixture shall be spread to the depth and width that will provide the specified compacted thickness, line, grade and cross section. Placing of the mixture shall be as continuous as possible. On areas where mechanical spreading and finishing is impracticable, the mixture may be spread, raked and luted by hand tools.

Immediately after screeding and prior to compaction, the surface shall be checked by the Contractor and irregularities adjusted. When the edge is feathered as in a wedge lift, it may be sealed by rolling. Irregularities in alignment and grade along the edges shall be corrected before the edges are rolled.

Hauling, spreading and finishing equipment shall be furnished that is capable of and operated in such a manner that the rolling operation will satisfactorily correct any surface blemishes.

The longitudinal joint in the subsequent lift shall offset that in the underlying lift by approximately six (6) inches. However, the joint in the top lift shall be at the centerline or lane line.

907-401.03.11--Compaction. After the mixture has been spread and surface irregularities corrected, it shall be thoroughly and uniformly compacted to the required line, grade, cross section and density.

907-401.03.12--Joints. Joints between previously placed pavement and pavement being placed shall be so formed as to insure thorough and continuous bond.

Transverse construction joints shall be formed by cutting the previously placed mixture to expose the full depth of the lift.

The contact surface of transverse joints and longitudinal joints, except hot joints, shall be sprayed

with a thin uniform tack coating before additional mixture is placed against the previously placed material.

Longitudinal joints shall be formed by overlapping the screed on the previously placed material for a width of at least one (1) inch and depositing the quantity of mixture to form a smooth, tight joint.

Joint Sealant. When a pay item for 907-403-S, Joint Sealant, is included in the contract, the contact surface of transverse joints and longitudinal joints in the surface lift, except hot joints, shall be sealed by spraying a thin, uniform coat of PavonTM, CrafcoTM Pavement Joint Adhesive No. 34524, Dura-Fill Cold Joint Adhesive, or approved equal, prior to placement of additional asphalt against the previously placed material. Manufacturer's recommendations shall be followed if the material needs to be re-heated, and when placing the thin, uniform coat.

Prior to application of the sealant, the face of the joint shall be thoroughly dry and free from dust or any other material that would prevent proper sealing. All joints shall be swept or blown free of loose material, dirt, vegetation, and other debris by means of compressed air or a power sweeper.

Truck and vehicle traffic shall not drive across a sealed joint until it has dried sufficient to prevent damage from tracking.

The Contractor shall furnish the Engineer three copies of the manufacturer's certification stating that the material used meets the requirement of the specifications.

907-401.03.13--Pavement Samples. The Contractor shall cut samples from each lift of asphalt at the time and locations designated by the Engineer. The samples shall be taken for the full depth of each lift and shall be of a size approved by the Engineer but not to exceed 120 square inches. Tools used for cutting or coring of samples shall be of the revolving blade type such as saw or core drill. Cores shall be taken using a 4.0 to 6.0-inch inside diameter coring bit. The sample hole shall be filled, compacted and finished by the Contractor to conform with the surrounding area. No additional compensation will be allowed for furnishing samples and repairing the areas with new pavement.

907-401.03.14--Shoulder Wedge. The Contractor shall attach a device to the screed of the paver that confines the material at the end gate and extrudes the asphalt material in such a way that results in a compacted wedge shape pavement edge of approximately 30 degrees, but not steeper than 35 degrees. The device shall maintain contact between itself and the road shoulder surface and allow for automatic transition to cross roads, driveways, and obstructions. The device shall be used to constrain the asphalt head reducing the area by 10% to 15% increasing the density of the extruded profile. Conventional single plate strike off shall not be used.

The device shall be TransTech Shoulder Wedge Maker, the Advant-Edge, or a similar approved equal device that produces the same wedge consolidation results. Contact information for these wedge shape compaction devices is the following.

1. TransTech Systems, Inc.
1594 State Street
Schenectady, NY 12304
800-724-6306
www.transtechsys.com
2. Advant-Edge Paving Equipment, LLC
P.O. Box 9163
Niskayuna, NY 12309-0163
518-280-6090
Contact; Gary D. Antonelli
Cell: 518-368-5699
email: garya@nycap.rr.com
Website: www.advantedgepaving.com

Before using a similar device, the Contractor shall provide proof that the device has been used on previous projects with acceptable results, or construct a test section prior to the beginning of work and demonstrate wedge compaction to the satisfaction of the Engineer. Short sections of handwork will be allowed when necessary for transitions and turnouts, or otherwise authorized by the Engineer.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-403-14

CODE: (SP)

DATE: 12/02/2014

SUBJECT: Asphalt Pavements

Section 403, Asphalt Pavements, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is deleted and replaced as follows.

SECTION 907-403 - ASPHALT PAVEMENTS

907-403.01--Description. This work consists of constructing one or more lifts of asphalt pavement meeting the requirements of Section 907-401 on a prepared surface in accordance with the requirements of this section and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the plans or established by the Engineer. This work shall also include applicable in-grade preparation of the underlying course in accordance with Section 321.

The Contractor must select one of the asphalt mixture processes (HMA or WMA) to be used on this project.

907-403.02--Material Requirements. Materials and their use shall conform to the applicable requirements of Subsection 907-401.02.

907-403.03--Construction Requirements.

907-403.03.1--General. Construction requirements shall be as specified in Subsection 907-401.03, except as otherwise indicated in this section or applicable special provisions.

907-403.03.2--Smoothness Tolerances. Except as noted herein, the finished smoothness of each lift shall conform to the designated grade and cross section within the following tolerances from grade stakes or other grade reference points set at 25-foot intervals:

	Lower* & Leveling Lifts	Lower* Intermediate Lift	Top Intermediate Lift	Surface Lift
Maximum deviation from grade and cross section at any point	1/2"	3/8"	1/4"	1/4"
Maximum deviation from A 10 foot straight edge.....	3/8"	1/4"	1/8"	1/8"

Note: Where more than four (4) lifts of asphalt are required, all lifts, excluding the top three (3) lifts, shall meet the requirements of the lower lift.

- * When tested longitudinally from a stringline located equidistant above points 50 feet apart, the distance from the stringline to the surface at any two points located 12½ feet apart shall not vary one from the other more than the maximum deviation allowed above from a 10-foot straight edge.

Grade stakes or other grade reference points set at 25-foot intervals and maximum deviation from grade and cross section will not be required provided an approved profile averaging device is furnished and properly used for the four conditions set forth herein; however, all other surface requirements are applicable.

- (a) Overlays with one overall lift.
- (b) Overlays with two or more overall lifts -- for each lift above the first overall lift provided each underlying overall lift is within the allowable tolerances.
- (c) Surface lift of new construction provided the underlying lift is within the allowable tolerances.
- (d) Full-depth asphalt construction for lifts above the lower lift provided the lower lift is within the specified tolerances for the lower intermediate lift.

In the placement of full depth asphalt pavement, where the chemically treated base is constructed, graded and/or trimmed, full lane width, to a surface tolerance of $\pm 3/8$ inches from design grade, stringline grade controls may be eliminated for the placement of the asphalt drainage course and all asphalt lifts. In addition, where the base course is crushed stone or crushed concrete and is constructed to a surface tolerance of $\pm 3/8$ inches from design grade using a stringline controlled spreader, stringline grade controls may be eliminated for the placement of the asphalt drainage course and all asphalt lifts.

All other tolerances as specified in Section 321 are applicable, except for bases, when tested longitudinally, the maximum deviation when measured at the 12½-foot midpoint shall be $\pm 3/8$ inches.

Acceptance and payment of asphalt will be determined on a lot to lot basis by cores taken from the completed pavement as outlined in Subsection 907-403.03.3.

Approved contacting type profile averaging devices are those devices capable of working in conjunction with a taut string or wire set to grade, or ski-type device with extreme contact points with the surface at least 30 feet apart. Approved non-contacting type profile averaging devices are laser type ski devices with at least four referencing mobile stations at a minimum length of 24 feet, or an approved equal.

When approved by the Engineer, a short ski or shoe may be substituted for a long ski on the

second paving operation working in tandem.

During the finishing and compacting of pavement lifts, it shall be the responsibility of the Contractor to check the surface and joints for progress toward conformance to surface requirements set forth herein. Variations from surface requirements exceeding the allowable tolerances shall be corrected at the Contractor's expense.

When a portland cement concrete pavement is to be placed on an asphalt lift, the finished top of the asphalt lift shall meet the requirements of Sections 32l and 50l.

Sections(s) or portions thereof representing areas excluded from a smoothness test with the High Speed Inertial Profiling System (IPS) shall also be excluded from consideration for a contract price adjustment for rideability.

Any contract price adjustment for rideability will be applied on a continuous basis to the pay tonnage, determined in accordance with Subsections 907-401.02.6.8 and 907-403.04, for the section(s) or portions thereof for which an adjustment is warranted.

Contract price adjustments for rideability shall only be applicable to the surface lift and furthermore to only the long continuous section(s) or portions of the long continuous section(s) of the surface lift that require smoothness be determined by using a profiling device.

907-403.03.2.1--Smoothness Tolerances for Mean Roughness Index (MRI). Smoothness tolerances shall be applied to asphalt pavements based on the following pavement categories.

Category A applies to the following pavement constructions:

- New construction
- Construction with three (3) or more lifts
- Mill and two (2) or more lifts

Category B applies to the following pavement constructions:

- Mill and one (1) lift
- Two (2) lift overlays without milling

Category C applies to the following pavement constructions:

- Single lift overlay without milling
- All 57,650-pound routes regardless of the pavement construction

Additional projects may qualify for Category C construction at the department's discretion. Spot Leveling does not count as a lift. Full width / continuous leveling courses that have a minimum thickness of $\frac{3}{4}$ " across the entire lane width will be considered a lift.

Category A projects shall have a long continuous interval (528-foot) surface MRI of not more than 60 inches per mile.

Category B projects shall have a long continuous interval (528-foot) surface MRI of not more than 70 inches per mile.

Category C projects shall have the existing surface profiled at no additional cost to the State. These projects shall be measured by a long fixed interval (528-foot) surface MRI and meet the higher value of the following requirements:

A 50% improvement in MRI from the existing surface
OR
80 inches per mile

In the case that 50% of the existing surface MRI is greater than 80 inches per mile, the short continuous threshold shall be increased from 160 inches per mile by the difference between 50% of the existing surface MRI and 80 inches per mile.

For all projects, areas of the surface lift with localized roughness greater than 160 inches per mile as determined by the continuous short interval (25') report will be identified for correction by the Project Engineer.

When a project has multiple lifts, the lift underlying the surface lift shall have a MRI of no more than 10 inches/mile more than the surface lift threshold for both long and short continuous intervals. Category B projects containing multiple lifts must meet the Category C percent improvement requirement for the underlying lift. Corrective action must be taken on those segments that do not meet this requirement. No unit price adjustment will be applied on any underlying lift.

For Category A and B projects, a unit price increase will be added when the MRI for the final surface lift, prior to any required localized roughness (short interval) corrective action, is less than or equal to fifty inches per mile (50.0 inches / mile) on the long interval report. These Projects will be considered for incentive pay based on the following guidelines for the long interval surface lift MRI.

Mean Roughness Index inches / mile	Contract Price Adjustment Percent of Asphalt Unit Bid Price
Less than 35.0	108
35.1 to 40.0	106
40.1 to 45.0	104
45.1 to 50.0	102
50.1 to Required Surface MRI	100

In addition to the above pay incentive factors, a project may be subject to a disincentive when the Long Continuous Interval MRI for the surface exceeds the allowable tolerance.

Mean Roughness Index (inches / mile)	Contract Price Adjustment Percent of Asphalt Unit Bid Price
Above 20.0 Over	REMOVE AND REPLACE
15.1 to 20.0 Over	80
10.1 to 15.0 Over	85
5.1 to 10.0 Over	90
0.1 to 5.0 Over	95
Required Surface MRI	100

For Category C projects, segments may be subject to a disincentive when the Fixed Interval MRI for the surface does not meet the minimum requirements.

Percent Improvement MRI (inches/mile)	Contract Price Adjustment Percent of Asphalt Unit Bid Price
Below 30 Percent	REMOVE AND REPLACE
30.1 to 35.0 Percent	80
35.1 to 40.0 Percent	85
40.1 to 45.0 Percent	90
45.1 to 50.0 Percent	95
Above 50%	100

Segment(s) or portions thereof representing areas excluded from a smoothness test shall also be excluded from consideration for a contract price adjustment for rideability. Where a segment less than 528 feet occurs at the end of a section, it will be combined with the preceding 528-foot segment for calculation of MRI. Corrective action must be taken on those sections that exceed the 'Remove and Replace' threshold as directed by the Project Engineer. The minimum remove and replace length will be 528 feet (0.1 mile). Additional smoothness testing shall be required on sections following replacement and will be required to meet *at least* the maximum surface MRI short of 'Remove and Replace' tolerance.

The above pay factors will be applied in conjunction with the Long Continuous Histogram Chart from ProVAL's Smoothness Assurance Module. The price adjustments for rideability will be tabulated in MDOT's Pay Incentive spreadsheet on the basis of a theoretical tonnage of 110 lbs/yd² * inch thickness (pounds per square yard * inch thickness) determined in accordance with Subsections 907-401.02.6.5 and 907-403.04, for the segment(s) or portions thereof for which an adjustment is warranted.

907-403.03.3--Thickness Requirements. Asphalt overlay lifts shall be constructed as nearly in accordance with the thickness shown on the plans as the underlying pavement and foundation will permit. Periodic and cumulative yield tests will be made to determine practicable conformity to the thickness of each lift. The Engineer may order modifications in placement thicknesses to prevent unwarranted variations in plan quantities.

When the paver is operating off an established grade line, no thickness determination will be

required for the various lifts of pavement. It is understood that the tolerances from design grade will control the thickness requirements.

When grade stakes are eliminated by Notice to Bidders or as outlined in Subsection 907-403.03.2(d) and where resulting in the placement of two (2) or more lifts, acceptance and payment will be determined on a lot to lot basis by cores taken from the completed pavement. Lots will be coincidental with acceptance lots for the surface lift as provided in Subsection 907-401.02.6.4, except that only lots resulting from the placement of mainline surface lift will be used for thickness assessment. One core will be obtained at random from each lot. Irregular areas will not be cored.

When the average thickness of all the cores from the lots representing a day's production, excluding any discarded by the Engineer for justifiable reason, is within three-eighths of an inch ($3/8''$) of the total pavement thickness shown on the plans, excluding lift(s) placed using an established grade line, corrective action will not be required and a price adjustment will not be made for non-conformity to specified thickness.

When the average thickness of all the cores from the lots representing a day's production is deficient in thickness by more than three eighths of an inch ($3/8''$) of the total pavement thickness shown on the plans, excluding lift(s) placed using an established grade line, the deficiency shall be corrected by overlaying the entire length of the day's production. The thickness of the overlay shall be equal to the thickness deficiency but no less than the minimum single lift laying thickness for the specified mixture.

When the thickness of all the cores from the lots representing a day's production is more than three eighths of an inch ($3/8''$) thicker than the total thickness shown on the plans, excluding lift(s) placed using an established grade line, a price adjustment will be made in accordance with Subsection 907-403.05.1.

The cores shall be cut and removed by the Contractor in the presence of the Engineer's representative and turned over to the Engineer's representative for further handling. The Contractor shall fill each core hole with surface lift mixture and compact to the satisfaction of the Engineer within 24 hours after coring.

907-403.03.4--Lift Corrections. Pavement exceeding the allowable surface tolerances shall be corrected at the Contractor's expense by the following methods:

Lower, Leveling and Lower Intermediate Lifts:

- (a) Removal or addition of mixture by skin patching, feather edging, wedge lift construction or full depth patching where appropriate and can be completed in a satisfactory manner.
- (b) Superimposing an additional layer which shall be an approved grade raise for the full roadway width and length of the area to be corrected.

Top Intermediate Lift:

- (a) Removal and the addition of sufficient mixture to provide the specified thickness. Corrections by this method shall be square or rectangular in shape and shall completely cover the area to be corrected.
- (b) Superimposing an additional layer of minimum lift thickness for mixture being used which shall be an approved grade raise for full roadway width of the area to be corrected. Transverse joints shall be perpendicular to the centerline of the pavement.

Surface Lift:

- (a) Removal and the addition of sufficient mixture to provide new material of at least minimum single lift laying thickness for full lane width of the area to be corrected. Transverse joints shall be perpendicular to the centerline of the lane.
- (b) Superimposing an additional layer (minimum lift thickness for mixture being used) which shall be an approved grade raise for full roadway width of the area to be corrected. Transverse joints shall be perpendicular to the centerline of the pavement.

All mixtures used in the correction of unacceptable pavement shall be approved by the Engineer prior to use.

907-403.03.5--Overlays or Widening and Overlays. In addition to the requirements of Subsections 907-403.03.1 through 907-403.03.4, the following requirements will be applicable when an existing pavement is to be overlaid or widened and overlaid.

907-403.03.5.1--Blank.

907-403.03.5.2--Sequence of Operations. In order to expedite the safe movement of traffic and to protect each phase of the work as it is performed, a firm sequence of operations is essential. Unless otherwise provided in the traffic control plan and/or the contract, the following appropriate items of work shall be begun and continually prosecuted in the order listed:

- (a) In sections designated by the Engineer, trim the shoulders along the pavement edges to provide drainage from the pavement.
- (b) Perform pre-rolling to locate areas of pavement with excessive movement per Section 511.
- (c) Perform selective undercutting and patching as directed per Subsection 907-403.03.5.4.
- (d) Perform pressure grouting as specified in Section 512.
- (e) Clean and seal joints per Section 413.
- (f) Complete preparation on one side of roadway to be widened and place widening

materials.

- (g) Reconstruct shoulders to elevation necessary to assure traffic safety.
- (h) Open the widened section to traffic.
- (i) Complete above work for other side of roadway.
- (j) Perform preliminary leveling as directed.
- (k) Apply interlayer as specified.
- (l) Place the first overall leveling lift.
- (m) After the first overall leveling lift, reconstruct shoulders as necessary to eliminate vertical differentials which may be hazardous to traffic.
- (n) Place first intermediate lift.
- (o) Construct shoulders to the contiguous elevation of the first intermediate lift.
- (p) Place remaining intermediate lift, if required.
- (q) Place surface lift.
- (r) Complete construction of shoulders.
- (s) Apply permanent traffic marking.
- (t) Final cleanup.

The above operations shall be performed in such a manner that traffic will be maintained on a paved surface at all times. Two-lane, two-way highways should not be restricted to a single lane in excess of a 3,000-foot section.

907-403.03.5.3--Widening of Pavement. The foundation for widening shall be formed by trenching or excavating to the required depth and constructing a smooth, firm and compacted foundation. It shall have sufficient density and stability to withstand the placement and compaction of subsequent lifts. Soft, yielding and other unsuitable material which the Engineer determines will not compact readily shall be removed and backfilled with granular material or asphalt as directed.

Except as provided herein, excavation for widening, undercutting or other required excavation shall be spread along the edge of the shoulders, foreslopes or other adjacent areas as directed and will be an absorbed item. When the quantity is in excess of what may be used satisfactorily on adjacent areas, the Engineer may direct that the material be loaded, hauled and spread uniformly

on other designated areas. In this case, compensation for handling surplus material will be in accordance with the appropriate pay items as provided in the contract or as extra work.

If the plans require widening of the shoulders or embankment with Contractor furnished material, all suitable material obtained from widening excavation may be used and will be measured and paid for as Contractor furnished materials. No measurement for payment of haul will be made.

Removal and disposal of old stakes, forms and other debris encountered in excavating shall be in accordance with Section 201 and shall be considered as incidental to and included in the unit prices bid for other items. No separate measurement will be made therefor. Pavement edges and surfaces shall be cleaned prior to final shaping and compaction of adjacent trenching or undercut areas.

Granular material for widening shall be placed on a previously prepared, smooth, firm and unyielding foundation in accordance with the typical section. Density of the granular material shall be as specified.

Asphalt for widening, including trench widening, shall meet the applicable requirements of Section 907-401, Section 907-403, and shall be placed in one or more layers as shown on the plans or directed. The surface of the mixture shall be finished as a continuation of the adjacent pavement slope.

Trench rollers or other compaction equipment shall be used to compact the foundation, granular material and bituminous mixtures for widening when standard width rolling equipment cannot be used.

907-403.03.5.4--Patching. Existing pavement which has failed or unsatisfactorily stabilized shall be removed as directed. Removal of pavement will be measured and paid for under the appropriate pay items as provided in the contract.

Backfill shall consist of asphalt or a combination of compacted layers of aggregate material and asphalt. Unless otherwise specified, the Engineer will make this determination based on depth and field conditions.

Asphalt used for backfilling will be measured and paid for at the contract unit price for the mixture designated on the plans as the lowest lift. Aggregate will be measured and paid for under the appropriate pay item as provided in the contract or as extra work.

907-403.03.5.5--Preliminary Leveling. All irregularities of the existing pavement, such as ruts, cross-slope deficiencies, etc., shall be corrected by spot leveling, skin patching, feather edging or a wedge lift in advance of placing the first overall lift.

907-403.03.5.6--Placement of Lifts. The leveling lift shall be placed in a layer, or layers, not exceeding approximately two and one-half inches compacted thickness.

When single lane construction is required, placement of a lift on the adjacent lane may be performed by an approved profile averaging device provided the lane previously placed is within the allowable tolerances for all surface requirements. When any of the tolerances are exceeded, the Contractor shall reestablish the control stringline for laying the adjacent lane should the Contractor elect to perform this work prior to correcting the deficiencies of the lane previously placed. In no case shall a "matching shoe" be used to control the grade of an adjacent lane.

In instances where there are only minor deviations from the allowable tolerances in the first overall lift, the Engineer may permit the Contractor to place the next higher lift by graded stringline in lieu of making the corrections.

Single lane placement of leveling, intermediate and surface lifts shall be limited to the distance covered in one and one-half days in advance of that placed in the adjacent lane.

907-403.03.5.7--Protection of Pavement. The pavement shall be protected and properly maintained until it has been compacted and cooled sufficiently for use by traffic.

907-403.04--Method of Measurement. Asphalt pavement, of the type specified, will be measured by the ton. The weight of the composite mixture shall be determined in accordance with the provisions of Subsection 907-401.03.2.1.11.

The pay quantities for each individual job mix formula (JMF) will be calculated using the approved JMF maximum specific gravity (Gmm) and the following formulas.

When the composite mixture has a maximum specific gravity of 2.540 or less,

$$T_p = T_w$$

When the composite mixture has a maximum specific gravity greater than 2.540,

$$T_p = T_w((100 - (((Gmm * A * B) - C) / (Gmm * A * B)) * 100)) / 100$$

Where:

- T_p = Total tonnage for payment
- T_w = Total tonnage weighed, used and accepted
- Gmm = Maximum Specific Gravity of the approved composite asphalt mixture
- A = 46.725 lbs/yd²/in
- B = 0.93 = 93% density
- C = 110.374 lbs/yd²/in = Theoretical density at 2.540 Gmm

Unless shown as a separate pay item, the furnishing and application of the tack coat will not be measured for payment. When payment is provided, tack coat will be measured as set out in Section 407.

Joint sealant will be measured by the linear foot for each joint sealed.

The quantity of bituminous mixture required to correct the work, when made at the expense of the Contractor, will not be measured for payment.

Any trenching required for widening will not be measured for payment, such cost thereof shall be included in other items of work.

Undercut required by the Engineer will be measured for payment under the appropriate excavation item as provided in the contract or as extra work. Pavement removal and any required trenching will not be included in the measurement for undercut.

Class "B" structural concrete base substituted for asphalt under portland cement concrete bridge end pavement, as per Subsection 502.03.1, will be paid for as asphalt calculated as follows:

Square yards of portland cement concrete bridge end pavement x concrete base thickness in inches x 0.055 = tons of asphalt.

907-403.05--Basis of Payment. Subject to the adjustments set out in Subsections 907-401.02.6.3, 907-401.02.6.4, 907-401.02.6.5 & 907-403.03.2, asphalt pavement, measured as prescribed above, will be paid for at the contract unit price per ton for each lift of pavement specified in the bid schedule and shall be full compensation for completing the work.

Joint sealant will be paid for at the contract unit price per linear foot for each joint which shall be full compensation for furnishing the joint sealant material, cleaning the joint, applying the sealant, and for all equipment, tools, labor, and incidentals necessary to complete the work.

907-403.05.1--Price Adjustment for Thickness Requirement. When grade stakes are eliminated as provided in Subsection 907-403.03.3 and the average thickness of all cores from lots representing a day's production is more than three eighths of an inch (3/8") thicker than the total specified thickness of the pavement, excluding lift(s) placed using an established grade line, a lump sum reduction in payment for the surface lift of lots representing a day's production will be made as follows:

Individual Day's = (Monetary Value of the Day's x $\frac{(D - 3/8)}{ST}$)
L.S. Reduction Surface Lift Production)

Where:

D = The day's average deviation from total pavement thickness shown on the plans, excluding lift(s) placed using an established grade line.

ST = Specified thickness for surface lift.

The total L.S. reduction for the project is the summation of the individual day's reductions in payment.

907-403.05.2--Pay Items.

Payment will be made under:

907-403-A: <u>(1)</u> , <u>(4)</u> , Asphalt Pavement	- per ton
907-403-B: <u>(2)</u> , <u>(4)</u> , Asphalt Pavement, Leveling	- per ton
907-403-C: <u>(3)</u> , <u>(4)</u> , Asphalt Pavement, Trench Widening	- per ton
907-403-D: <u>(2)</u> , HT, Asphalt Pavement, Polymer Modified	- per ton
907-403-E: <u>(2)</u> , HT, Asphalt Pavement, Polymer Modified, Leveling	- per ton
907-403-S: Joint Sealant	- per linear foot or mile

- (1) 4.75-mm mixture, 9.5-mm mixture, 12.5-mm mixture, 19-mm mixture, or 25-mm mixture
- (2) 4.75-mm mixture, 9.5-mm mixture, 12.5-mm mixture, or 19-mm mixture
- (3) 19-mm mixture or 25-mm mixture
- (4) ST, MT or HT

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-407-2

CODE: (SP)

| DATE: 07/22/2014

SUBJECT: Tack Coat

Section 407, Tack Coat, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-407.02.1--Bituminous Material. Delete the second sentence of the first paragraph of Subsection 407.02.1 on page 281, and substitute the following:

When not specified, the materials shall be as specified in Table 410-A on page 293.

907-407.03.3--Application of Bituminous Material. Delete the first paragraph of Subsection 407.03.3 on page 281, and substitute the following.

Tack coat shall be applied with a distributor spray bar. A hand wand will only be allowed for applying tack coat on ramp pads, irregular shoulder areas, median crossovers, turnouts, or other irregular areas. Bituminous materials and application rates for tack coat shall be as specified in Table 410-A on page 293. Tack coat shall not be applied during wet or cold weather, or to a wet surface. Emulsions shall be allowed to "break" prior to superimposed construction.

907-407.05--Basis of Payment. Delete the pay item at the end of Subsection 407.05 on page 282, and substitute the following:

907-407-A: Asphalt for Tack Coat *

- per gallon

* Grade may be specified

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-626-25

CODE: (IS)

DATE: 11/13/2012

SUBJECT: Thermoplastic Traffic Markings

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-626.01--Description. After the last sentence of the first paragraph of Subsection 626.01 on page 443, add the following.

All pavement marking material, excluding edge lines over rumble strips, shall be applied using the extrusion/ribbon method. Edge lines placed over rumble strips shall be applied using the atomization/spray method.

907-626.03.1.1--Equipment. After the second paragraph of Subsection 626.03.1.1 on page 444, add the following.

When edge lines are placed over rumble strips, the equipment must be able to apply the marking material using the atomization/spray method instead of extrusion/ribbon method.

907-626.03.1.2--Construction Details. Delete the second sentence of the first full paragraph of Subsection 626.03.1.2 on page 445, and substitute the following.

Unless otherwise specified in the plans or contract documents, the thickness shall be 90 mils for edge lines, center lines, lane lines, barrier lines and detail stripe including gore markings, and 120 mils for crosswalks, stop lines, and railroad, word and symbol markings.

After the last sentence of the third full paragraph of Subsection 626.03.1.2 on page 445, add the following.

When double drop thermoplastic stripe is called for in the contract, additional beads by the drop-on method shall be applied as follows.

Class A glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.
Class B glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.

The Class B glass beads shall be applied to the newly placed stripe first, followed by the application of the Class A glass beads.

907-626.05--Basis of Payment. Delete the pay items listed on page 446 and substitute the following.

907-626-A: 6" Thermoplastic* Traffic Stripe, Skip White	- per linear foot or mile
907-626-B: 6" Thermoplastic* Traffic Stripe, Continuous White	- per linear foot or mile
907-626-C: 6" Thermoplastic* Edge Stripe, Continuous White	- per linear foot or mile
907-626-D: 6" Thermoplastic* Traffic Stripe, Skip Yellow	- per linear foot or mile
907-626-E: 6" Thermoplastic* Traffic Stripe, Continuous Yellow	- per linear foot or mile
907-626-F: 6" Thermoplastic* Edge Stripe, Continuous Yellow	- per linear foot or mile
907-626-G: Thermoplastic* Detail Stripe, <u>Color</u>	- per linear foot
907-626-H: Thermoplastic* Legend, White	- per linear foot or square foot

* Indicate Double Drop if applicable

***CONTRACT DOCUMENTS AND TECHNICAL
SPECIFICATIONS***

FOR

**EDWARDS STREET TO HALL
AVENUE PATHWAY**

FOR THE

**CITY OF HATTIESBURG
HATTIESBURG, MISSISSIPPI
FORREST COUNTY**



AUGUST, 2016

PREPARED BY



CONTENTS

Bidders Information and Bid Forms

Advertisement for Bids	00030-1
Instructions to Bidders	00100-1
Bidder's Proposal	00300-1
Contract Forms.....	00500-1

Project Manual

EJCDC	00700-1
Supplementary Conditions.....	00800-1

Technical Specifications

Division 01 – General Requirements

01010 Summary of Work	01010-1
01025 Measurement and Payment	01025-1
01026 Schedule of Values	01026-1
01027 Applications for Payment	01027-1
01030 Special Project Procedures.....	01030-1
01041 Project Coordination	01041-1
01041.1 Utility Coordination	01041.1-1
01045 Cutting and Patching.....	01045-1
01050 Field Engineering.....	01050-1
01060 Regulatory Requirements.....	01060-1
01200 Project Meetings	01200-1
01310 Construction Schedules.....	01310-1
01340 Shop Drawings, Project Data, and Samples.....	01340-1
01410 Testing Laboratory Services	01410-1
01600 Material and Equipment.....	01600-1
01630 Substitutions	01630-1
01710 Cleaning	01710-1
01720 Project Record Documents	01720-1
01740 Warranties and Bonds.....	01740-1

Division 907 — Special Provisions to *MS Standard Specifications for Road and Bridge Construction*

907-227-10	Hydroseeding
907-237-4	Wattles
907-304-13	Granular Courses
907-401-7	Asphalt Pavement
907-403-14	Asphalt Pavement
907-407-2	Tack Coat
907-626-25	Thermoplastic Traffic Markings

ADVERTISEMENT FOR BIDS
EDWARDS STREET TO HALL AVENUE PATHWAY
CITY OF HATTIESBURG, MISSISSIPPI

Sealed bids will be received by the City of Hattiesburg, at the City Clerk's office, Mississippi, hereafter referred to as Owner, located at 200 Forrest Street, Hattiesburg, Mississippi, 39401, until 10:00 A.M., Local Time, Thursday, **October 20, 2016** for supplying all labor, equipment, and materials (as specified) necessary for the construction of the above referenced project. Work consists of constructing a 10' asphalt pathway along an abandoned rail bed from Edwards Street to Hall Avenue.

The above general outline of features of the work does not in any way limit the responsibility of the Contractor to perform all work and furnish all labor, equipment and materials required by the specifications and the drawings referred to therein.

Bidder must be qualified under Mississippi Law and show current Certificate of Responsibility issued by the Mississippi State Board of Public Contractors establishing his classification as to the value and type of construction on which he is authorized to bid.

Each Bidder shall write his Certificate of Responsibility Number on the outside of the sealed envelope containing his proposal.

Proposals shall be submitted in duplicate, sealed and deposited with the Owner prior to the hour and date hereinbefore designated. No bidder may withdraw his bid within 90 days after the actual date of the opening thereof.

Each Bidder must submit with his proposal a separate attachment stating his qualifications to perform the work. The Statement of Qualifications shall list past projects of similar size and nature, a list of references with name and telephone number, a list of key personnel who will perform the work, and other information supporting the bidder's qualifications.

Awarding public contracts to non-resident Bidders will be on the same basis as the non-resident bidder's state awards contracts to Mississippi Contractors bidding under similar circumstances. In order to ensure that Mississippi's so-called Golden Rule is followed state law requires a non-resident bidder is to attach to his bid a copy of his resident state's current laws pertaining to such state's treatment of non-resident contractors.

Each Bidder must deposit with his proposal, a Bid Bond or Certified Check in an amount equal to five percent of his bid, payable to the Owner, as bid security. Bidders shall also submit a current financial statement, if requested, by the Owner. The successful bidder will be required to furnish a Payment Bond and Performance Bond each in the amount of 100 percent of the contract amount.

Copies of the Instructions to Bidders, Bid Forms, Contract Drawings and Contract Specifications (with the exception of the Mississippi Standard Specifications for Road and Bridge Construction) may be procured at the office of the Engineer, Neel-Schaffer located at 704 Hardy Street, Hattiesburg, Mississippi 39401 between the hours of 8:00 A.M. and 5:00 P.M., Local Time, Monday through Friday, upon payment of \$100.00 for each set, which will not be refunded. Checks are to be made payable to the Engineer.

00030-1

"Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition" as referred to herein, may be purchased from the Mississippi Department of Transportation.

The Owner hereby notifies all Bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged and women's business enterprises will be afforded the full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The Engineer is Neel-Schaffer, Inc., 704 Hardy Street, Hattiesburg, Mississippi 39401; Phone No. (601) 545-1565, Fax No. (601)-545-2267. Geoffrey P. Crosby, P.E. – Senior Project Manager.

The Owner reserves the right to reject any and all bids and to waive any informalities or irregularities therein.

BY: 

City Clerk

City of Hattiesburg, Mississippi

DATES OF PUBLICATION:

Hattiesburg American

September 11, 2016

September 18, 2016

Clarion Ledger

September 11, 2016

September 18, 2016

INSTRUCTIONS TO BIDDERS

EDWARDS STREET TO HALL AVENUE PATHWAY CITY OF HATTIESBURG, MISSISSIPPI

CONTENTS

1.	Coordination of Specifications	00100-2
2.	Date and Place of Opening of Proposals.....	00100-2
3.	Form for Proposals.....	00100-2
4.	Prequalification	00100-3
5.	Certificate of Responsibility	00100-3
6.	Annual License to Bid	00100-3
7.	Charges for Proposals, Plans and Specifications	00100-3
8.	Omissions and Discrepancies.....	00100-3
9.	Addenda	00100-3
10.	Interpretations	00100-4
11.	Bid Security	00100-4
12.	General Information.....	00100-4
13.	Rejection of Proposal	00100-4
14.	Conditions of Work	00100-5
15.	Security for Faithful Performance	00100-5
16.	Insurance	00100-5
17.	Subcontractors	00100-5
18.	Method of Award – Lowest Responsive Bidder	00100-5
19.	Obligation of Bidder	00100-6
20.	Subsurface Data	00100-6
21.	Execution of Contract	00100-6
22.	Interchangeable Terms.....	00100-6
23.	Qualifications of Bidder, Owner's Rights	00100-6
24.	Materials and Equipment	00100-7
25.	Non-Resident Bidders.....	00100-7
26.	Designating Owner and Engineer	00100-7
27.	Vibratory Roller	00100-7
28.	Materials Testing	00100-7
29.	Contract Time	00100-7

1. COORDINATION OF SPECIFICATIONS

Work under this Contract shall be performed in accordance with the Contract Documents, which includes General Conditions, Supplementary Conditions and Technical Specifications contained therein. Division 200 through 800 of the *Mississippi Standard Specifications for Road and Bridge Construction* (2004 Edition) is made a part hereof as if it were attached hereto, except where superseded by special provisions contained herein.

2. DATE AND PLACE OF OPENING OF PROPOSALS

The date, time, and place for opening Proposals will be as set out in the published "Advertisement for Bids."

The Owner reserves the right to postpone the date for presentation and opening of Proposals and will give notice of any such postponement to each known prospective Bidder.

3. FORM FOR PROPOSALS

Proposals must be submitted in duplicate on the forms furnished by the Owner and the envelope containing the Proposals must be sealed and addressed to:

City Clerk
City of Hattiesburg
200 Forrest Street
Hattiesburg, Mississippi 39401

The outside of the envelope containing the Proposal shall bear the inscription:

**SEALED BID FOR: EDWARDS STREET TO HALL AVENUE PATHWAY
CITY OF HATTIESBURG, MISSISSIPPI**

BY _____

Certificate of Responsibility No. _____

State License No. _____

The duplicate Proposals shall be in the form of one original Proposal, marked "ORIGINAL" and one photocopy (Xerox or similarly reproduced copy) marked "PHOTOCOPY" of the original Proposal.

If Proposals are forwarded by the U.S. Postal Service, delivery shall be by Registered or Certified Mail.

4. PREQUALIFICATION

Contractors desiring to Bid on proposed construction contracts who have not been prequalified by the Owner, shall file with the Owner a current financial statement showing assets and liabilities as a prerequisite to entering into contracts with the Owner. If prequalification is required, the appropriate submittal information will be requested from bidders during the bid evaluation performed by the Engineer and Owner after receipt of Proposals.

All Bidders must be in good standing with the Owner. Good standing includes, among other things: (a) whether Bidder is currently delinquent on the completion of work or punchlist items under another Owner contract for which it was a successful bidder; (b) whether Bidder is currently in default under another Owner contract for which it was a successful bidder; and (c) whether Bidder has failed to fulfill provisions of another Owner contract for which it was a successful bidder, during the past two years.

5. CERTIFICATE OF RESPONSIBILITY

Prior to filing Bids on Owner projects (in excess of \$50,000), the prospective Bidder must obtain a Certificate of Responsibility from the Mississippi State Board of Public Contractors, establishing his classification as to the value and the type of construction on which he is authorized to bid. Application must be submitted to the Board at least 30 days prior to a regular Board meeting scheduled every Quarter on the first Tuesday of January, April, July and October.

6. ANNUAL LICENSE TO BID (Not Used)

7. CHARGES FOR PROPOSALS, PLANS AND SPECIFICATIONS

Prospective Bidders may obtain Proposal forms including one copy of Contract Documents upon payment of the amount of money stipulated in the "Advertisement for Bids."

No refunds will be made for return of Plans or Specifications.

If a contract award is made, the successful Bidder will be furnished (free of charge) two additional sets of the Plans and Specifications.

In the event all Bids are rejected and the Project is re-advertised, the original Bidders shall **NOT** be entitled to free Bidders Proposal forms for the subsequent letting.

8. OMISSIONS AND DISCREPANCIES

Should a Bidder find discrepancies, errors or omissions in the Drawings or Specifications, or should he be in doubt as to the correctness of the Plan details, dimensions and layout, he should immediately notify the Engineer in order to permit checking and any necessary revisions or modifications.

9. ADDENDA

Prior to the date set for opening of Bids, the right is reserved, in the interests of the Owner, as it may require, to revise or amend the Contract Documents. Such revisions, if any, will be announced by an Addendum or Addenda, and copies of such Addenda will be furnished to all prospective Bidders who have purchased Plans and Specifications for acknowledgment by return fax. If the revisions and

Addenda are of a nature which require material changes in quantities or prices Bid, or both, the date set for opening Bids may be postponed to enable Bidders to revise their Bids. In such case, the Addendum or Addenda will include an announcement of the new date for opening Bids.

10. INTERPRETATIONS

No oral interpretation made to any Bidder as to the meaning of the Contract Documents shall be considered an effective modification of any of the provisions of the Contract Documents. In order to ensure appropriate and concise responses, and avoid any misinterpretations, no verbal questions will be received. Written requests for interpretation of the Plans and Specifications shall be submitted to the Engineer at least 10 days prior to opening of Proposals so that a formal decision can be given in writing to all known prospective Bidders in the form of an Addendum. The Contract Document contains the provisions required for the construction of the Project. Information obtained from an officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the Contract.

11. BID SECURITY

All Bids shall be accompanied by a Bid Security in the form of a Certified Check upon a national or state bank or a Bid Bond made by a bonding company registered in the State of Mississippi, drawn and made payable to the Owner in an amount equal to five percent of the Bid. The Certified Check or Bid Bond must be enclosed in the same envelope with the Bid. Except as noted below, the Bid Security of all known unsuccessful Bidders will be returned promptly after a Notice of Award has been sent to the successful Bidder or in the event that all Bids are rejected.

The Bid Security of the next two lowest qualified Bidders will be retained until the Contract has been executed with the lowest qualified Bidder. The Bid Security of the successful Bidder will be returned when satisfactory Performance and Payment Bonds have been furnished and approved and the Contract executed.

12. GENERAL INFORMATION

Bidders shall inform themselves and comply with all pertinent Owner regulations and ordinances, State and Federal laws, licenses and tax liabilities which may in any manner affect their Bids and the prosecution of the work. The successful bidder will be responsible for obtaining all building, plumbing, and electrical permits required by the local city government. Special attention is directed to the rules and regulations published by the Mississippi State Tax Commission outlining certain taxes imposed on Contractors by the state of Mississippi.

13. REJECTION OF PROPOSAL

Proposals may be rejected in the case of any omission, alterations of forms, additions or conditions not called for, unauthorized alternate Bids, incomplete Bids, erasures or irregularities of any kind. Bids received conditioning their consideration or rejection upon Bids for the other work submitted by the same Bidder may be classed as irregular, unless the Contract Documents specifically invite or permit conditional or combination Bids. Bids in which the prices obviously are unbalanced may be rejected.

14. CONDITIONS OF WORK

Each Bidder must inform himself fully of the conditions relating to the construction of the Project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all materials and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

15. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with his delivery of the Executed Contract, the Contractor shall furnish a Performance Bond and a Payment Bond each in the sum of 100% of the Contract amount as security for faithful performance of his Contract and for the payment of all persons performing labor on the Project under his Contract and furnishing materials in connection with his Contract, as specified in the Contract Documents. The surety of such Bonds shall be issued by a duly authorized surety company listed on the Treasury Department's most current list Circular 570 (as amended) and satisfactory to the Owner.

Attorneys in fact who sign Bid Bonds or Payment Bonds and Performance Bonds must file with each bond a certified and effective dated copy of their Power of Attorney. Failure of the successful Bidder to execute the Contract and to supply the required bonds within 10 calendar days from the date that the Notice of Award is delivered, or within such extended period as the Owner may grant based upon reasons determined sufficient by the Owner, shall constitute a default, and the Owner, at his discretion, may either award the Contract to the next lowest qualified Bidder or readvertise for Bids, and may charge against the Bidder the difference between the amount for which a Contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the Bid Bond. If a more favorable bid is received by readvertising, the defaulting Bidder shall have no claim against the Owner for a refund. The Contractor's bond will not be released until all provisions of the Contract have been fulfilled.

16. INSURANCE

The Contractor will be required to carry the types and amounts of insurance named in the Contract Documents for the full life of the Contract.

17. SUBCONTRACTORS

Bidders are specifically advised that any person, firm or other party to whom it is proposed to award a Subcontract must be acceptable to the Owner. Nothing contained in the Contract Documents shall create any contractual relation between subcontractor and the Owner.

18. METHOD OF AWARD – LOWEST RESPONSIVE BIDDER

The Owner will award the Contract to the lowest and best Bid unless all Bids are rejected. The award will be based on the evaluation of the low bid for the total base bid or the total alternate bid as decided upon by the Owner.

The responsiveness of the low Bidder shall be determined by (1) the completeness and regularity of the Bidders Proposal; (2) the Bidders Proposal being without exclusions or special conditions; (3) the Bid Form having no alternative Bids for any item unless requested in the Technical Specifications;

and (4) such other factors as may be considered under State law, Federal law or regulation.

The evaluation of the low bidder will be based on whether the Bidder (1) maintains a permanent place of business; (2) has adequate plant equipment to do the work properly and within the time limit that is established; (3) has adequate financial status to meet his obligations contingent to the work; (4) has adequate manpower and present workload is such that he can perform according to a reasonable schedule; and (5) such other factors as may be considered under State law, Federal law or regulation.

19. OBLIGATION OF BIDDER

At the time of the opening of Bids, each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Plans and Contract Documents (including all Addenda).

The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to his Bid. Submission of Bid shall be accepted as prima facie evidence that Bidder has inspected the site and is familiar with the Plans and Contract Documents.

20. SUBSURFACE DATA

Not Used.

21. EXECUTION OF CONTRACT

If the successful Bidder is a corporation, the officer who signs the Contract shall furnish copies of the resolution of the Directors of the corporation authorizing him to sign the contract. Such resolution should bear the seal of the corporation.

Subject to the applicable provisions of law, the Contract shall be in full force and effect only from and after the date when a fully executed and approved counterpart thereof has been rendered or delivered, or both, to the Contractor or his duly authorized agent or representative. Deposit of said counterpart in the United States mail in an envelope or wrapper properly addressed shall constitute compliance with these provisions by the Owner.

22. INTERCHANGEABLE TERMS

The terms "Bid" and "Proposal" wherever they are used in the Contract Documents are interchangeable and have the same meaning. The terms "Contract" and "Agreement", are interchangeable and have the same meaning. The terms "Contract Drawings" and "Plans", are interchangeable and have the same meaning.

23. QUALIFICATIONS OF BIDDER, OWNER'S RIGHTS

The Owner may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

24. MATERIALS AND EQUIPMENT

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a manufacturer, fabricator, supplier, or distributor, the naming of the item in this manner is intended to establish the type, function and quality required. Materials or equipment of other manufacturers, fabricators, suppliers, or distributors may be accepted by the Engineer if sufficient information is submitted by the Contractor to allow the Engineer to determine that the material or equipment proposed is equivalent to that named in the Contract Documents. Bidders are referred to Section 6.3 of the General Conditions regarding procedures for approval of substitute materials and equipment.

25. NON-RESIDENT BIDDERS

Awarding public contracts to non-resident Bidders will be on the same basis as the non-resident Bidder's state awards contractors to Mississippi Contractors bidding under similar circumstances. In order to ensure that Mississippi's so called "Golden Rule" is followed, state law requires a non-resident Bidder to attach to his bid a copy of his resident state's current laws pertaining to such state's treatment of non-resident contractors.

26. DESIGNATING OWNER AND ENGINEER

Any reference in the Contract Documents to the State of Mississippi, Mississippi Department of Transportation, Mississippi Transportation Commission, or any official thereof shall be interpreted to mean the City of Hattiesburg, Mississippi, the "Owner".

Any reference in the Standard Specifications to the Project Engineer, District Engineer, Office Engineer, or Engineer shall be interpreted to mean the Engineer for the City of Hattiesburg, Mississippi, Neel-Schaffer, Inc.

27. VIBRATORY ROLLER

Bidders are advised that the use of vibratory rollers **will not** be allowed and the lot density required in Subsections 401.02.6.4.1 and 401.03.1.4 shall be **reduced by one percent (1%)**.

28. MATERIALS TESTING

The Contractor shall be responsible for all testing of materials associated with the project. Materials shall be tested in accordance to the requirements and frequencies outlined in the *Mississippi Standard Specifications for Road and Bridge Construction* (2004 Edition), and shall be considered an absorbed item.

29. CONTRACT TIME

The number of calendar days to complete the work will be **60** calendar days.

The calendar date for completion of the work to be performed by the Contractor for this project shall be a specified completion date. The specified completion date for this project will be calculated by adding the above number of calendar days to the date of the notice to proceed.

BIDDER'S PROPOSAL
EDWARDS STREET TO HALL AVENUE PATHWAY
CITY OF HATTIESBURG, MISSISSIPPI

CONTENTS

Bidder's Proposal	00300-2
Prices Bid and Approximate Quantities.....	00300-4
Bidder's Corporate Declaration.....	00300-7
Non-Collusion Affidavit	00300-8
Bid Bond	00300-9
Proposed Subcontractors.....	00300-11

COPY

BIDDER'S PROPOSAL

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

DATE: October 20, 2014

PROPOSAL OF Scottie Watkins
(Name of Bidder)

2051 Hwy 84E Laurel MS 39443
(Address of Bidder)

for construction of the Edwards Street to Hall Avenue Pathway.

The documents on which this Proposal is based include the Instructions to Bidders, Bid Forms, General Conditions, Supplementary Conditions, Supplemental General Conditions, Technical Specifications, Contract Drawings, and all supplements, amendments and addenda for this Project and are made a part hereof by reference.

**TO: CITY OF HATTIESBURG
200 FORREST STREET
HATTIESBURG, MISSISSIPPI 39401**

Gentlemen:

The following Proposal is submitted on behalf of the undersigned Bidder(s) and no others. Evidence of my (our) authority to submit the Proposal is hereby furnished. The Proposal is submitted without collusion on the part of any person, firm or corporation.

I (We), the undersigned Bidder(s), certify that I (we) have carefully examined the Instructions to Bidders, Bid Forms, General Conditions, Supplemental Conditions, Technical Specifications, Contract Drawings and any and all Addenda thereof.

I (We) further certify that I, (we) have visited and carefully examined the site of the proposed Work and have inspected the location and condition of all public utilities and existing structures or other facilities on the site or adjacent thereto which may be affected by the proposed construction and fully understand all conditions relative to construction difficulties, hazards, labor, transportation and all other factors affecting the prosecution of the work covered by this Proposal.

I (We) understand that the quantities mentioned below are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid. No increase in quantities of work shall be performed until a written change order is duly executed in advance and approved in the public minutes of the Owner.

00300-2

COPY

Prices Bid and Approximate Quantities – Base Bid

Pay Item	Description	Qty	Unit	Unit Price	Price Extension
201-A	CLEARING AND GRUBBING	0.2	ACRE	6,200.00	1,240.00
203-A	UNCLASSIFIED EXCAVATION, AH, LVM	75	CY	12.00	900.00
203-G	EXCESS EXCAVATION, AH, LVM	20	CY	16.00	320.00
203-EX	BORROW EXCAVATION, B-9, AH, LVM	500	CY	18.00	9,000.00
211-B	TOPSOIL FOR SLOPE TREATMENT, CONTRACTOR FURNISHED	350	CY	24.00	8,400.00
907-227-A	HYDROSEEDING	1.5	ACRE	1,950.00	2,925.00
234-A	TEMPORARY SILT FENCE	1000	LF	3.25	3,250.00
907-237-A	WATTLES, 12"	100	LF	8.25	825.00
907-304-G	SIZE 610 CRUSHED STONE BASE	700	CY	86.10	60,270.00
907-403-A	9.5MM, ST, ASPHALT PAVEMENT	445	TON	100.00	44,500.00
907-407-A	ASPHALT FOR TACK COAT	270	GAL	4.50	1,215.00
607-B	60" CHAIN LINK FENCE	150	LF	29.10	4,365.00
618-A	MAINTENANCE OF TRAFFIC	1	LS	XXXX	6,000.00
618-B	ADDITIONAL CONSTRUCTION SIGNS	1	SF	\$10	\$10
620-A	MOBILIZATION	1	LS	XXXX	19,500.00
815-B	GROUTED RIPRAP	410	SY	70.00	28,700.00
815-E	GEOTEXTILE UNDER GROUTED RIPRAP, TYPE V, NON-WOVEN	410	SY	2.40	984.00
TOTAL BASE BID \$				197,404.00	

Prices Bid and Approximate Quantities – Add Option No. 1

Pay Item	Description	Qty	Unit	Unit Price	Price Extension
630-A	STANDARD ROADSIDE SIGNS, SHEET ALUMINUM, 0.080" THICKNESS	530	SF	34.30	18,179.00
630-C	STEEL U-SECTION POSTS, 3.0 TO 3.5 LB/FT	1050	LF	4.36	4,578.00
907-626-PP	THERMOPLASTIC LEGEND, WHITE, ROAD, 4' HEIGHT	12	EACH	256.00	3,072.00
907-626-PP	THERMOPLASTIC LEGEND, WHITE, XING, 4' HEIGHT	12	EACH	256.00	3,072.00
907-626-PP	THERMOPLASTIC LEGEND, WHITE, XING, 8' HEIGHT	12	EACH	485.85	5,830.20
907-626-PP	THERMOPLASTIC LEGEND, WHITE, BIKE SYMBOL, 8' HEIGHT	12	EACH	353.75	4,245.00
907-626-Z	THERMOPLASTIC LEGEND, WHITE, 6" EQUIVALENT	3300	LF	2.80	9,240.00
TOTAL ADD OPTION NO. 1 \$					48,216.20

THE BIDDER'S TOTAL ABOVE IS HIS TOTAL BID BASED ON HIS UNIT PRICES AND LUMP SUM PRICES AND THE ESTIMATED QUANTITIES. THIS FIGURE IS FOR INFORMATION ONLY AT THE TIME OF OPENING BIDS. THE OWNER WILL MAKE THE BID TABULATION FROM THE UNIT PRICES AND LUMP SUM PRICES BID. IF THERE IS AN ERROR IN THE TOTAL BY THE BIDDER, IT SHALL BE CHANGED AS ONLY THE UNIT PRICES AND LUMP SUM PRICES SHALL GOVERN.

NOTE: FAILURE OF BIDDER TO INCLUDE PRICES FOR THE ALTERNATE BID ITEMS MAY RENDER HIS PROPOSAL NON-RESPONSIVE.

NOTE: Bids shall include sales tax and all other applicable taxes and fees.

COPY

COPY

I (We) further propose to execute the Contract Agreement as bound herein within ten working days after receipt of Contract Forms from the Owner and to complete the work within the contract time. I (We) agree to pay as liquidated damages the actual costs, expenses and other losses reasonably incurred by Owner for each consecutive calendar day beyond the specified Contract Time.

I (We) also propose to execute a Performance Bond and a Payment Bond, as shown in the Specifications, each in an amount of not less than one hundred percent (100%) of the total of my (our) Bid. These Bonds shall not only serve to guarantee the completion of the Work on my (our) part, but also to guarantee the excellence of both workmanship and materials until the Work is finally accepted.

I (We) enclose a Bid Bond or Certified Check for 5 percent of One Hundred Ninety-two Thousand Four Hundred Four & no cents DOLLARS (\$ 192,404.00)
(Base Bid Amount)

and hereby agree that in case of my (our) failure to execute the Contract and furnish the Bonds within ten calendar days after delivery of the Notice of Award, the amount of this check (Bid Bond) will be forfeited to the Owner as liquidated damages arising out of my (our) failure to execute the Contract as proposed.

It is understood that in case I (we) am (are) not awarded the Work, the Certified Check or Bid Bond submitted as Bid security will be returned as stipulated in the Contract Documents.

Bidder acknowledges receipt of the following Addenda:

No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____

Respectfully Submitted,


Contractor(s)

By: President
Title

2051 Hwy 84E
Lumbert MS 39443
Address

COPY

BIDDER'S CORPORATE DECLARATION

(TO BE FILLED IN IF BIDDER IS A CORPORATION)

Date: October 20, 20 16.

Our corporation is chartered under the Laws of the state of Mississippi and the names, titles and business addresses of the executives are as follows:

Scottie Watkins
President

Brenda Watkins
Secretary

2051 Hwy 84E
Laurel MS 39443

2051 Hwy 84E
Laurel MS 39443

Brenda Watkins
Treasurer

2051 Hwy 84E
Laurel MS 39443

DECLARATION OF PARTNERSHIP

(To be filled in if a Bidder is a Partnership)

Our Partnership is composed of the following individuals:

Address

Address

COPY

NON-COLLUSION AFFIDAVIT

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

(THIS AFFIDAVIT MUST BE EXECUTED FOR THE BID TO BE CONSIDERED)

STATE OF Mississippi

COUNTY OF Forrest) ss.

Scottie Walker
(Person) being first duly sworn,
deposes and says that he is President

(Sole owner, a partner, president, secretary, etc.)

of Walker Construction Co. Inc.
(Name of Firm) the party making the foregoing Proposal or Bid;

that such Bid is genuine and not collusive; that said Bidder is not financially interested in, or otherwise affiliated in a business way with any other bidder on the same contract; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person or persons interested in the proposed contract; and that all statements contained in said Proposal or Bid are true; and further, that such Bidder has not, directly or indirectly submitted his Bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.

Scottie Walker
Affiant

Sworn to and subscribed before me this 20 day of October, 2016

Rhonda J. Ballard
Notary Public in and for

Jones County,

My Commission Expires

8-31, 2020



00300-8

COPY

PROPOSED SUBCONTRACTORS

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

The names and addresses of all persons and parties who will be utilized for subcontract Work in the foregoing Bidder's Proposal are listed below. (The Contractor must list all Subcontractors to be utilized on the Work. Failure to list Subcontractors may cause the Bidder's Proposal to be rejected by the Owner as non-responsive.) If the Bidder does not propose Subcontractors, so state.

NAME

ADDRESS

Road-Pro Safety, Inc.

P.O. Box 54292 Jackson MS 39288

T.L. McCarl Contractors Inc.

P.O. Box 1765, Pascagoula MS 39568

Tony Thomsberry

2910. Hwy 84E Lumbert, MS 39443

RTM McQueen Contracting Inc.

80 Ramsey McQueen Rd Collins MS 39428

A+ Sealing & Striping, Inc.

58 Ingeam Rd Lumbert MS 39443

THE AMERICAN INSTITUTE OF ARCHITECTS

COPY

AIA Document A310 Bid Bond

KNOW ALL MEN BY THESE PRESENTS, THAT WE Walters Construction Co., Inc.

2051 Highway 84 East, Laurel, MS 39443

as Principal, hereinafter called the Principal, and SureTec Insurance Company

1330 Post Oak Boulevard, Suite 1100, Houston, TX 77056

a corporation duly organized under the laws of the State of TX

as Surety, hereinafter called the Surety, are held and firmly bound unto City of Hattiesburg

200 Forrest Street, Hattiesburg, MS 39401

as Obligee, hereinafter called the Obligee, in the sum of Five Percent of Amount Bid

Dollars (\$ 5%),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Edwards Street to Hall Avenue Pathway City of Hattiesburg,
Mississippi

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and materials furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 20th day of October, 2016

Walters Construction Co., Inc.

(Principal)

(Seal)

By: [Signature]

President

(Title)

[Signature]
(Witness)

SureTec Insurance Company

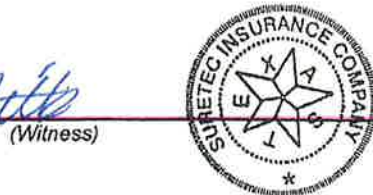
(Surety)

(Seal)

By: [Signature]

Attorney-in-Fact G. Ford Mosby

(Title)



SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

G. Ford Mosby

Jackson, MS

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Surety Bond No.: Bid Bond

Principal: Walters Construction Co., Inc.

Obligee: City of Hattiesburg

Amount: See Bond Form

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of March, A.D. 2013.

SURETEC INSURANCE COMPANY

By:

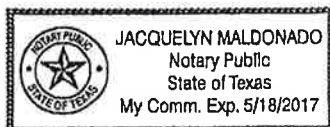
John Knox Jr., President

State of Texas
County of Harris

ss:



On this 21st day of March, A.D. 2013 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



[Signature]

Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 20th day of October, 2016, A.D.

[Signature]
M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.

For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.

CONTRACT FORMS

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

CONTENTS

Contract.....	00500-2
Partnership Certificate	00500-5
General Instructions for Bonds	00500-6
Performance Bond	00500-7
Payment Bond.....	00500-9
Notice of Award.....	00500-11
Notice to Proceed	00500-13
Contract Change Order	00500-15

CONTRACT

EDWARDS STREET TO HALL AVENUE PATHWAY

CITY OF HATTIESBURG, MISSISSIPPI

This Contract, made this the _____ day of _____, 20____, by and between the City of Hattiesburg, Mississippi, a municipal corporation, hereinafter called "Owner" and _____ doing business as a _____ located in _____ hereinafter called the "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. THE CONTRACTOR will commence and complete the "Edwards Street to Hall Avenue Pathway" project in strict accordance with the Contract Documents and the Contract Drawings.
2. The Contractor will commence the work required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED and will attain Final Completion within the contract time stipulated in the Advertisement for Bids unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS. The Contractor agrees to pay, as liquidated damages, the actual damages, costs, losses and expenses reasonably incurred by Owner for each consecutive calendar day that he shall be in default in attaining Final Completion within the time stipulated as provided herein.
3. The term "CONTRACT DOCUMENTS" means and includes Advertisement for Bids, Instructions to Bidders, Bidder's Proposal, Bid Bond, Contract, Payment Bond, Performance Bond, General Conditions, Supplementary Conditions, Technical Specifications, Contract Drawings, Notice of Award, Notice to Proceed, Addenda (if any), and all subsequent Change Orders, Supplemental Agreements and/or other modifications as if formally recopied in this Contract.
4. The Contractor agrees to furnish all materials in place and to faithfully complete all of said work contemplated by this Contract in good and workmanlike manner, strictly in accordance with said Contract Documents, Contract Drawings and other requirements of the Owner, and to the complete satisfaction of the Owner or his authorized representatives, and in accordance with the Laws of the state of Mississippi and the Ordinances of the Owner, for which the Owner hereby agrees to pay and the Contractor agrees to accept a sum of money in current funds equal to the contract amount of _____ (\$ _____) plus the amount of any supplemental agreements and force accounts for extra work authorized and duly set forth in a written change order approved and executed by the Owner and set forth in the public minutes of the Owner and in full compensation for furnishing all materials, the doing of all work contemplated under the Contract, as well as all loss or damage, if any, arising out of the nature of the work, or the action of the weather, and any and all other unforeseen obstructions or difficulties that may be encountered in the prosecution of the same, the Contractor assuming all risks of every kind and description in the performance of this

Contract.

5. The Contractor shall protect, indemnify and save harmless the Owner from and against any and all damage, loss, claims, judgments or expenses, including but not limited to reasonable attorney's fees, which the Owner may suffer or be subjected to by the performance of the work, including but without limitation injury to or death of any person whomever and destruction or damage to any property whatsoever.
6. Attached hereto and made a part of this Contract is a Performance Bond, executed by a Surety Company doing business in the state of Mississippi, in the sum of

(\$_____).
7. Attached hereto and made a part of this Contract is a Payment Bond, executed by a Surety Company doing business in the state of Mississippi, in the sum of

(\$_____).
8. The Contractor agrees to allow the Owner, or any of their duly authorized representatives, access to any books, documents, papers and records of the Contractor which are directly pertinent to the project which is the subject of this Contract, for the purpose of making audits, examinations, excerpts and transcriptions, and Contractor agrees to insert an identical clause in any and all subcontracts.
9. The Owner will pay to the Contractor in the manner and at such times and amounts as set forth in the Contract Documents.
10. This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.
11. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the Owner shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five days before the effective date of such termination. Notwithstanding the above, the Contractor shall not be relieved of liability to the Owner for damages sustained by the Owner by virtue of any breach of the Contract by the Contractor and the Owner may withhold any payments to the Contractor until such time as the exact amount of damages due the Owner from the Contractor is determined.

IN WITNESS THEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in _____ counterparts, each of which shall be deemed an original on the date first above written. (number)

OWNER

CONTRACTOR

BY _____

BY _____

ATTEST _____

ATTEST _____

(Seal)

(Seal)

PARTNERSHIP CERTIFICATE

State of _____

County of _____ Ss.

On this _____ day of _____, 20_____, before me personally appeared _____, known to me and known by me to be the person who executed the above instrument, who being by me first duly sworn, did depose and say that he is a general partner in the firm of _____; that said firm consists of himself and _____; and that he executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

Notary Public in the

County of _____

State of _____

Notary Seal

My Commission Expires:

CORPORATE CERTIFICATE

I, _____ certify that I am the Secretary of the Corporation named as Contractor in the foregoing Contract; that _____, who signed said Contract on behalf of the Contractor was then _____ of said Corporation; that said Contract was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.

Secretary

Corporate Seal

GENERAL INSTRUCTIONS FOR BONDS

1. The surety on each Bond must be a responsible surety company, which is qualified to do business in Mississippi and satisfactory to the Owner.
2. The name, including full Christian name and residence of each individual party to the Bond shall be inserted in the body thereof, and each such party shall sign the Bond with his usual signature on the line opposite the seal and if signed in Maine, Massachusetts or New Hampshire an adhesive seal shall be affixed opposite the signature. The bond must be either signed or countersigned by a Mississippi Resident Agent of the Surety Company.
3. If the principals are partners, their individual names will appear in the body of the Bond with the recital that they are partners composing a firm, naming it; and all the members of the firm shall execute the Bond as individuals.
4. The signature of a witness shall appear in the appropriate place, attesting to the signature of each individual party to the Bond.
5. If the principal or surety is a corporation, the name of the State in which incorporated shall be inserted in the appropriate place in the body of the Bond, and said instrument shall be executed and attested under the corporate seal as indicated in the form. If the corporation has no corporate seal the fact shall be stated, in which case, a scroll or adhesive seal shall appear following the corporate name.
6. The official character and authority of the person or persons executing the Bond for the principal, if a corporation, shall be certified by the secretary or assistant secretary, according to the form attached hereto. In lieu of such certificate there may be attached to the Bond copies of so much of the records of the corporation as will show the official character and authority of the officer signing, duly certified by the secretary or assistant secretary, under the corporate seal, to be true copies.
7. The date of this Bond must not be prior to the date of the Contract in connection with which it is given.
8. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____ hereinafter called Principal, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars,
\$(_____) in lawful money of the United States, for the payment of which sum well
and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these
presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain
contract with the OWNER, dated _____ day of _____ 20 _____,
a copy of which is hereto attached and made a part hereof for the construction of :

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings,
covenants, terms, conditions, and agreements of said contract during the original term thereof, and any
extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the
one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and
shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by
reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the
OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full
force and effect.

NOW, THEREFORE, if the Principal shall promptly make payment of all taxes, licenses, assignments,
contributions, damages, penalties, and interest thereon, when and as the same may lawfully be due the state of
Mississippi, or any county, municipality, board, department, commission, or political subdivision thereof, by
reason of and directly connected with the performance of said Contract or any part thereof as provided by
Sections 27-65-1, 27-65-21, 27-67-301 and 31-5-3, supra, or any other applicable statute or other authority,
then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change,

00500-7

extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this statement is executed in _____ counterparts, each one of which shall
(number)
be deemed an original, this the _____ day of _____, 20 _____.

ATTEST:

(Principal) Secretary
(Seal)

Principal
By _____

(Address)

Witness as to Principal

(Address)

ATTEST:

Witness as to Surety

(Address)

Surety
By _____

(Address)

NOTE: Date of BOND must not be prior to date of Contract.
 If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS THAT

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal,
(Corporation, Partnership, or Individual)

and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____
Dollars, \$(_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____ 20 _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

00500-9

IN WITNESS WHEREOF, this statement is executed in _____ counterparts, each one of which shall
(number)
be deemed an original, this the _____ day of _____, 20 _____.

ATTEST:

(Principal) Secretary
(Seal)

Principal
By _____

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

By _____

Witness as to Surety

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract.
 If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most
 current list (Circular 570 as amended) and be authorized to transact business in the State
 where the PROJECT is located.

NOTICE OF AWARD

Date _____

TO: _____

RE: Edwards Street to Hall Avenue Pathway
 City of Hattiesburg, Mississippi

NOTICE OF AWARD

Gentlemen:

The Owner has considered the Proposal submitted by you for the above referenced Work in response to its Advertisement for Bids and Instructions to Bidders.

You are hereby notified that your Proposal has been accepted in the amount of \$_____.

You are required by the Instruction to Bidders to execute the Contract and furnish to the Owner the required Contractor's Performance Bond, Payment Bond and certificates of insurance within 10 calendar days from the date of delivery of this Notice to you. We have enclosed five copies of the necessary contract forms and bond forms. Please return all five copies of these documents to the offices of Neel-Schaffer, 704 Hardy Street, Hattiesburg, MS 39401.

If you fail to execute said Contract and to furnish said Bonds within 10 days from the date of delivery of this Notice, the Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your proposal as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by Law.

You are required by the General Conditions and Supplementary Conditions to submit to Neel-Schaffer, Inc. an estimated progress schedule, a preliminary schedule of Shop Drawing submissions and a preliminary schedule of values of the Work within 10 days after the effective date of this Contract, all in accordance with Article 2.5 of the General Conditions.

00500-11

You are required to return an acknowledged copy of this Notice of Award directly to the City of Hattiesburg, Mississippi, Attention: Lamar Rutland, and to Neel-Schaffer, Inc.

Sincerely,

NEEL-SCHAFFER, INC.

Geoffrey P. Crosby, P.E.
Project Engineer

c: Lamar Rutland, P.E.
City of Hattiesburg
200 Forrest Street
Hattiesburg, MS 39401

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by _____ this, the
_____ day of _____, 20_____.

By _____

Title _____

NOTICE TO PROCEED

Date _____

To: _____

Attention: _____

REFERENCE: NOTICE TO PROCEED
EDWARDS STREET TO HALL AVENUE PATHWAY
CITY OF HATTIESBURG, MISSISSIPPI

Dear _____:

You are hereby notified to commence Work in accordance with the Contract dated _____, on or before _____. You are to complete the Work within ____ consecutive calendar days from the effective date of this Notice to Proceed. The date of Final Completion is therefore _____. Liquidated damages in the amount of the actual damages, costs, losses and expenses reasonably incurred by the OWNER per calendar day for each day the Work has not achieved Final Completion after _____ will be imposed unless the contract time is otherwise adjusted for due cause by change orders to the Contract. Liquidated Damages, as defined herein, will be assessed unless the Contract Time is otherwise adjusted for due cause by change order to the Contract.

The engineering firm of Neel-Schaffer, Inc. will act as the Engineer on behalf of the City of Hattiesburg, Mississippi for the work to be performed under the contract. Geoffrey P. Crosby, P.E., of Neel-Schaffer, Inc. will be the designated representative of the Engineer.

Please return a copy of this NOTICE TO PROCEED and ACCEPTANCE OF NOTICE to the undersigned and to Neel-Schaffer, Inc., indicating your receipt of this document in the space provided below.

Sincerely,

City of Hattiesburg, Mississippi

Lamar Rutland, P.E.
Engineering Director

00500-13

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED

is hereby acknowledged by _____

this, the _____ **day**

of _____, **20**_____.

By_____

Title_____

CONTRACT CHANGE ORDER

OWNER: _____ PROJECT NAME: _____

CONTRACTOR: _____

DATE: _____

CHANGE ORDER NUMBER: _____ CONTRACT NUMBER: _____

REASON FOR CHANGE: _____

YOU ARE HEREBY REQUESTED TO COMPLY WITH THE FOLLOWING CHANGES FROM THE CONTRACT
PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS: (USE ADDITIONAL SHEETS IF REQUIRED)

ITEM NO.	DESCRIPTION OF CHANGE(S) (QUANTITIES, ETC.)	QTY	UNIT COST	TOTAL CONTRACT
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00

TOTAL CONTRACT CHANGE	\$
	TOTAL CONTRACT
ORIGINAL CONTRACT AMOUNT:	\$
CURRENT CONTRACT AMOUNT:	\$
THIS CONTRACT CHANGE	
REVISED CONTRACT AMOUNT:	\$
CURRENT CONTRACT COMPLETION DATE:	
TIME EXTENSION REQUIRED BY CHANGE:	
REVISED CONTRACT COMPLETION DATE:	
THIS DOCUMENT SHALL BE AN AMENDMENT TO THE CONTRACT AND ALL PROVISIONS OF THE CONTRACT WILL APPLY. RECOMMENDED BY: _____ ENGINEER _____ DATE _____ NEEL-SCHAFFER, INC. ACCEPTED BY: _____ CONTRACTOR _____ DATE _____	

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

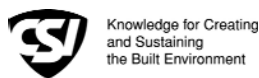
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by



The Associated General Contractors of America



Construction Specifications Institute

Copyright ©2002

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

TABLE OF CONTENTS

	<u>Page</u>
ARTICLE 1 - DEFINITIONS AND TERMINOLOGY.....	6
1.01 <i>Defined Terms</i>	6
1.02 <i>Terminology</i>	8
ARTICLE 2 - PRELIMINARY MATTERS	9
2.01 <i>Delivery of Bonds and Evidence of Insurance</i>	9
2.02 <i>Copies of Documents</i>	9
2.03 <i>Commencement of Contract Times; Notice to Proceed</i>	9
2.04 <i>Starting the Work</i>	9
2.05 <i>Before Starting Construction</i>	9
2.06 <i>Preconstruction Conference</i>	9
2.07 <i>Initial Acceptance of Schedules</i>	9
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE	10
3.01 <i>Intent</i>	10
3.02 <i>Reference Standards</i>	10
3.03 <i>Reporting and Resolving Discrepancies</i>	10
3.04 <i>Amending and Supplementing Contract Documents</i>	11
3.05 <i>Reuse of Documents</i>	11
3.06 <i>Electronic Data</i>	11
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS.....	11
4.01 <i>Availability of Lands</i>	11
4.02 <i>Subsurface and Physical Conditions</i>	12
4.03 <i>Differing Subsurface or Physical Conditions</i>	12
4.04 <i>Underground Facilities</i>	13
4.05 <i>Reference Points</i>	13
4.06 <i>Hazardous Environmental Condition at Site</i>	13
ARTICLE 5 - BONDS AND INSURANCE	14
5.01 <i>Performance, Payment, and Other Bonds</i>	14
5.02 <i>Licensed Sureties and Insurers</i>	15
5.03 <i>Certificates of Insurance</i>	15
5.04 <i>Contractor's Liability Insurance</i>	15
5.05 <i>Owner's Liability Insurance</i>	16
5.06 <i>Property Insurance</i>	16
5.07 <i>Waiver of Rights</i>	17
5.08 <i>Receipt and Application of Insurance Proceeds</i>	17
5.09 <i>Acceptance of Bonds and Insurance; Option to Replace</i>	17
5.10 <i>Partial Utilization, Acknowledgment of Property Insurer</i>	18
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES.....	18
6.01 <i>Supervision and Superintendence</i>	18
6.02 <i>Labor; Working Hours</i>	18
6.03 <i>Services, Materials, and Equipment</i>	18
6.04 <i>Progress Schedule</i>	18
6.05 <i>Substitutes and "Or-Equals"</i>	19
6.06 <i>Concerning Subcontractors, Suppliers, and Others</i>	20
6.07 <i>Patent Fees and Royalties</i>	21
6.08 <i>Permits</i>	21
6.09 <i>Laws and Regulations</i>	21
6.10 <i>Taxes</i>	22
6.11 <i>Use of Site and Other Areas</i>	22
6.12 <i>Record Documents</i>	22
6.13 <i>Safety and Protection</i>	22
6.14 <i>Safety Representative</i>	23
6.15 <i>Hazard Communication Programs</i>	23

6.16	<i>Emergencies</i>	23
6.17	<i>Shop Drawings and Samples</i>	23
6.18	<i>Continuing the Work</i>	24
6.19	<i>Contractor's General Warranty and Guarantee</i>	24
6.20	<i>Indemnification</i>	24
6.21	<i>Delegation of Professional Design Services</i>	25
ARTICLE 7 - OTHER WORK AT THE SITE		25
7.01	<i>Related Work at Site</i>	25
7.02	<i>Coordination</i>	26
7.03	<i>Legal Relationships</i>	26
ARTICLE 8 - OWNER'S RESPONSIBILITIES		26
8.01	<i>Communications to Contractor</i>	26
8.02	<i>Replacement of Engineer</i>	26
8.03	<i>Furnish Data</i>	26
8.04	<i>Pay When Due</i>	26
8.05	<i>Lands and Easements; Reports and Tests</i>	26
8.06	<i>Insurance</i>	26
8.07	<i>Change Orders</i>	26
8.08	<i>Inspections, Tests, and Approvals</i>	26
8.09	<i>Limitations on Owner's Responsibilities</i>	27
8.10	<i>Undisclosed Hazardous Environmental Condition</i>	27
8.11	<i>Evidence of Financial Arrangements</i>	27
ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION.....		27
9.01	<i>Owner's Representative</i>	27
9.02	<i>Visits to Site</i>	27
9.03	<i>Project Representative</i>	27
9.04	<i>Authorized Variations in Work</i>	27
9.05	<i>Rejecting Defective Work</i>	27
9.06	<i>Shop Drawings, Change Orders and Payments</i>	28
9.07	<i>Determinations for Unit Price Work</i>	28
9.08	<i>Decisions on Requirements of Contract Documents and Acceptability of Work</i>	28
9.09	<i>Limitations on Engineer's Authority and Responsibilities</i>	28
ARTICLE 10 - CHANGES IN THE WORK; CLAIMS		28
10.01	<i>Authorized Changes in the Work</i>	28
10.02	<i>Unauthorized Changes in the Work</i>	29
10.03	<i>Execution of Change Orders</i>	29
10.04	<i>Notification to Surety</i>	29
10.05	<i>Claims</i>	29
ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK.....		30
11.01	<i>Cost of the Work</i>	30
11.02	<i>Allowances</i>	31
11.03	<i>Unit Price Work</i>	31
ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES		32
12.01	<i>Change of Contract Price</i>	32
12.02	<i>Change of Contract Times</i>	33
12.03	<i>Delays</i>	33
ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.....		33
13.01	<i>Notice of Defects</i>	33
13.02	<i>Access to Work</i>	33
13.03	<i>Tests and Inspections</i>	33
13.04	<i>Uncovering Work</i>	34
13.05	<i>Owner May Stop the Work</i>	34
13.06	<i>Correction or Removal of Defective Work</i>	34
13.07	<i>Correction Period</i>	34
13.08	<i>Acceptance of Defective Work</i>	35
13.09	<i>Owner May Correct Defective Work</i>	35
ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION		36
14.01	<i>Schedule of Values</i>	36
14.02	<i>Progress Payments</i>	36
14.03	<i>Contractor's Warranty of Title</i>	37
14.04	<i>Substantial Completion</i>	37

14.05	<i>Partial Utilization</i>	38
14.06	<i>Final Inspection</i>	38
14.07	<i>Final Payment</i>	38
14.08	<i>Final Completion Delayed</i>	39
14.09	<i>Waiver of Claims</i>	39
ARTICLE 15	- SUSPENSION OF WORK AND TERMINATION.....	39
15.01	<i>Owner May Suspend Work</i>	39
15.02	<i>Owner May Terminate for Cause</i>	39
15.03	<i>Owner May Terminate For Convenience</i>	40
15.04	<i>Contractor May Stop Work or Terminate</i>	40
ARTICLE 16	- DISPUTE RESOLUTION	41
16.01	<i>Methods and Procedures</i>	41
ARTICLE 17	- MISCELLANEOUS	41
17.01	<i>Giving Notice</i>	41
17.02	<i>Computation of Times</i>	41
17.03	<i>Cumulative Remedies</i>	41
17.04	<i>Survival of Obligations</i>	41
17.05	<i>Controlling Law</i>	41
17.06	<i>Headings</i>	41

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times

but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered", "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement

or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or

responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work

(unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's

sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor’s making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

- a. reviewing and checking all such information and data,
- b. locating all Underground Facilities shown or indicated in the Contract Documents,
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will

promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to

entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified

in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection

from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any

deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. Loading Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep

Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall

promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and

Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have

resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall

be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

- a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

- b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

- c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted

by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent

inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial

Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and, will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance

with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be

governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

CONTENTS

1.	Definitions	00800-2
2.	Commencement of Contract Time: Notice to Proceed	00800-2
3.	Before Starting Construction	00800-2
4.	Preconstruction Conference	00800-2
5.	Subsurface and Physical Conditions.....	00800-2
6.	Insurance Requirements.....	00800-3
7.	Contractor's Responsibilities	00800-5
8.	Record Documents.....	00800-5
9.	Limitations on ENGINEER'S Responsibilities.....	00800-5
10.	Change of Contract Time.....	00800-5
11.	Payments to CONTRACTOR.....	00800-5
12.	List of Contract Drawings.....	00800-7
13.	Liquidated and Special Damages.....	00800-7
14.	Suspension of Work and Termination	00800-7

SUPPLEMENTARY CONDITIONS

1. Definitions

- A. The definition of "Technical Specifications" shall be the same as the definition for Specifications stated in Paragraph 1.01 under item number 43 of the General Conditions.
- B. Delete Paragraph 1.01.A.12 of the General Conditions in its' entirety.
- C. In Paragraph 1.01A.52 delete the following words, "or responding to differing or unseen subsurface or physical conditions under which the work is to be performed or to emergencies."

2. Commencement of Contract Time: Notice to Proceed

The commencement of Contract Time, as stated in Item 2.03 of the General Conditions is changed to read The Contract Time will commence to run within the sixtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the sixtieth day after the Effective Date of the Agreement.

Notice to Proceed may be given at any time within sixty days after the Effective Date of the Agreement. Refer to the Instructions to Bidders regarding execution of the Contract.

3. Before Starting Construction

In addition to the requirements of Paragraph 2.05 of the General Conditions, "**CONTRACTOR** shall deliver to the **OWNER**, with his signed Contract, all bonds and insurance which he is required to purchase and maintain in accordance with Article 5 of the General Conditions. A copy shall also be submitted to the **ENGINEER**. The **OWNER** shall deliver to the **CONTRACTOR** a copy of all policies of insurance which the **OWNER** is required to purchase and maintain in accordance with Article 5 of the General Conditions."

4. Preconstruction Conference

The time period for holding the preconstruction conference as stated in Paragraph 2.06 of the General Conditions shall be within 30 days after the Effective date of the Agreement, but before the **CONTRACTOR** starts the Work at the site.

5. Subsurface and Physical Conditions

Paragraphs 4.02 and 4.03 shall be deleted in its' entirety and replaced with the following:

DIFFERING SITE CONDITIONS PROVISION:

Execution of this Contract (Agreement) by the Contractor is a representation that the Contractor has visited the site, that general and local conditions are suitable for the work to be performed and that the Contractor accepts all conditions at the Project site. The Contractor assumes all risks with respect to the requirements of the Contract Documents, including without limitation the characteristics (natural and manmade) of the site, site accessibility, labor rates and availability, weather conditions, and any other matter that could affect the performance and cost of the work.

6. Insurance Requirements

- A. Paragraphs 5.05 and 5.06 shall be deleted in their entirety.
- B. Paragraphs 5.07.B, 5.07.B.1 and 5.07.B.2 shall be deleted in their entirety.
- C. In addition to the requirements of Article 5 of the General Conditions, insurance coverage specified herein constitutes the minimum requirements and said requirements shall in no way lessen or limit the liability of the **CONTRACTOR** under the terms of the Contract. The **CONTRACTOR** shall procure and maintain at his own expense any additional kinds and amounts of insurance that, in his own judgment, may be necessary for his proper protection in the prosecution of the Work.
 - 1. The **CONTRACTOR** shall carry insurance as prescribed herein and all policies shall be with companies satisfactory to the **OWNER**. If a part of this Contract is sublet, the **CONTRACTOR** shall require each Subcontractor to carry insurance of the same kinds and in like amounts as carried by the **CONTRACTOR**, including all additional insureds and waivers of subrogation.
 - 2. Certificates of insurance shall state that 30 days written notice will be given to the **OWNER** before the policy is canceled or changed. No **CONTRACTOR** or Subcontractor will be allowed to start any construction work on this Contract until certificates of all insurance required herein and all coverage requirements specified in contract documents are filed with and approved by the **OWNER**. The certificates shall show the type, amount, class of operations covered, effective dates and the dates of expiration of policies.
 - 3. The **CONTRACTOR** shall secure and maintain in effect for the period of the **CONTRACT** and pay all premiums for the following kinds and amounts of insurance:
 - a. Worker's Compensation and Employer's Liability Insurance: This insurance shall protect the **CONTRACTOR** against all claims under applicable State Worker's Compensation Laws. The **CONTRACTOR** shall also be protected and shall cause each Subcontractor to be protected against claims for injury, disease, or death of employees, which for any reason, may not fall within the provisions of a Worker's Compensation Law. The liability limits shall not be less than the required statutory limits for Worker's Compensation and Employer's Liability limits in the amount of ONE MILLION DOLLARS (\$1,000,000.00). **CONTRACTOR** and subcontractors shall supply **OWNER** endorsements from their carriers evidencing waiver of subrogation in favor of the **OWNER**.

-
- b. **CONTRACTOR'S** and Subcontractor's Comprehensive General Liability Insurance, including bodily injury, property damage, contractual and other standard coverage contained in Comprehensive General Liability Insurance, in an amount of not less than ONE MILLION DOLLARS (\$1,000,000) per occurrence and aggregate. **OWNER** shall be provided an endorsement naming the **OWNER** as an insured from the insurer for the work contracted. The Comprehensive General Liability policies carried by both the **CONTRACTOR** and the Subcontractors shall contain an endorsement to include the coverage of the following hazards:
- i. Explosion, collapse, and underground property damage to include any damage or destruction of property below the surface of the ground, such as wires, conduits, pipes, mains, sewers, etc., caused by the **CONTRACTOR'S** operations.
 - ii. The collapse of and structural injury to any building, structure or property on or adjacent to the **OWNER'S** premises or right-of-way caused by the **CONTRACTOR'S** operations in the removal of other buildings, structures, or supports, or by excavation below the surface of the ground.
 - iii. Contractual Liability Coverage for the Hold Harmless segments of the Contract Documents.
- c. **CONTRACTOR'S** Contingent or Protective Liability and Property Damage: In case part of this Contract is sublet, the **CONTRACTOR** shall secure contingent or protective liability and property damage insurance to protect the **CONTRACTOR** from any and all claims arising from the operation of Subcontractors in the execution of Work included in the Contract. In no case shall the amount of such protection be less than the limits of \$500,000/\$1,000,000 for Public Liability Insurance and \$500,000/\$1,000,000 for Property Damage Insurance. The coverage in each case shall be acceptable to the **OWNER**.
- d. Auto Liability: The **CONTRACTOR** shall maintain Auto Liability Insurance in the amount of not less than ONE MILLION DOLLARS (\$1,000,000) Combined Single Limit to protect him from any and all claims arising from the use of the following:
- i. **CONTRACTOR'S** own automobiles and trucks.
 - ii. Hired and non-owned automobiles and trucks.
 - iii. Automobiles and trucks owned by Subcontractors.
- The aforementioned is to cover use of automobiles and trucks on and off the site of the Project. The **OWNER** shall be provided an endorsement from the insurer naming the **OWNER** as an insured for the work contracted.
- e. **OWNER'S** Protective Liability Policy: The **CONTRACTOR** shall maintain **OWNER'S** Protective Liability Insurance with the **OWNER** as the named insured, and the **ENGINEER**, and their servants, agents and employees as additional insureds, in an amount not less than ONE MILLION DOLLARS (\$1,000,000).
- f. Umbrella Liability: The **CONTRACTOR** shall provide **OWNER** a certificate of insurance evidencing Umbrella Liability Insurance in the amount of not less than FIVE MILLION DOLLARS (\$5,000,000).
- g. Builder's Risk and Boiler and Machinery Insurance: NOT USED.

h. Property Insurance: No property insurance is required for this project.

7. Contractor's Responsibilities

Delete Paragraph 6.02.B in its entirety.

8. Record Documents

In addition to the requirements of Paragraph 6.12 of the General Conditions, **CONTRACTOR** shall provide accurate 'mark-ups' acceptable to the **ENGINEER** on or before the date of Substantial Completion of the Project for use by the **ENGINEER** in the preparation of 'record' drawings. Final payment will not be made to the **CONTRACTOR** prior to the **ENGINEER** receiving these mark-ups from the **CONTRACTOR**.

9. Limitations on ENGINEER'S Responsibilities

In addition to the requirements of Paragraph 9.09.B, when it comes to his attention, the **ENGINEER** will immediately notify the **OWNER** in the event that the **CONTRACTOR** is not complying with the Contract Documents or is conducting the Work in such a manner that could be considered grounds for termination of the Contract. The **CONTRACTOR** shall retain responsibility for performing all Work in compliance with the Contract Documents.

The following language shall be added to Paragraph 9.09.B:

“Consistent with the express provisions of this Section 00700, Article 6.13, Article 6.17.D.2, Article 9.02.B, Article 9.09, this Article 9.09.B, and Article 14.02.B.4.b, any reference to “safety” elsewhere in this contract, including but not limited to those found in Section 00700, Articles 4.02.B.1, 4.04.A.2.d, 4.04.B.1, 4.06.B.1, 6.02.B, 6.14, 6.15, 6.16, 6.17.C.1.c, and 13.02.A, does not impose upon the Engineer any duty, obligation or other contractual undertaking to administer the “safety” aspects of Contractor’s performance, or any other matter relating to the Contractor’s means, methods, techniques, sequences or procedures. Contractor’s contractual safety obligations and means and methods during construction are the sole responsibility of the Contractor and are not being administered, overseen or reviewed in any way by the Engineer in performing its contractual obligations”

10. Change of the Contract Time

In addition to the requirements of Paragraph 12.03 of the General Conditions, rainstorms which are encountered in the project area on a regular and seasonal basis do not constitute an abnormal weather condition.

11. Payments to **CONTRACTOR**

Paragraph 14.02, Application for Payments, is deleted in its' entirety and the following substituted therefore:

A. Monthly Estimates and Partial Payments: The **CONTRACTOR'S** partial payment period shall end on the last day of each month. The **CONTRACTOR** shall submit acceptable

Application for Payment to the **ENGINEER** by the date indicated on the payment schedule as supplied to **CONTRACTOR** by **ENGINEER** provided that the amount due on completed work is at least \$500.00. The partial payment request shall be filled out and signed by the **CONTRACTOR** covering the work completed as of the date of the request and accompanied by such supporting documentation as is required by the Contract Documents and also as the **ENGINEER** may reasonably require. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include in any monthly estimate advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site, the Application for Payment shall also be accompanied by such data, satisfactory to **OWNER**, as will establish **OWNER'S** title to the material and equipment and protect **OWNER'S** title to the material and equipment and protect **OWNER'S** interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of **CONTRACTOR** stating that all previous progress payments received on account of the Work have been applied to discharge in full all of **CONTRACTOR'S** obligations reflected in prior Applications for Payment.

- B. After each monthly estimate has been approved, the **OWNER** shall pay to the **CONTRACTOR** 95 percent of the amount of said estimate. From the total value of each estimate there will be deducted an amount equivalent to 5 percent of the whole as a retainage to be held by the **OWNER**. The monthly estimates will be approximate only and subject to correction in any subsequent estimate rendered following discovery of the error. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include any monthly advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work.
- C. Subsequent to discovery of any defective or questionable work, an amount equal to the estimated value of such work will be deducted from the next current estimate. The sum will not be included in a subsequent estimate until the defects have been remedied to the **ENGINEER'S** satisfaction.
- D. The **OWNER** reserves the right to withhold payment of any monthly estimate that becomes due if, in the opinion of the **OWNER'S** Attorney, such action is warranted because of any breach of the Contract Provisions or malfeasance on the part of the **CONTRACTOR** or because the progress or the quality of the work is unsatisfactory and does not comply with the Plans and Specifications.

Paragraph 14.02.C of the General Conditions is modified to read “60 days after presentation of the Application for Payment to **OWNER** with **ENGINEER’S** recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by **OWNER** to **CONTRACTOR**.”

Paragraph 14.07.C of the General Conditions is modified to read, "If the Application and accompanying documentation are appropriate as to form and substance, **OWNER** shall, within 60 days after receipt thereof, pay **CONTRACTOR** the amount recommended by **ENGINEER**."

Delete Paragraph 14.09.A.2 in its entirety.

12. List of Contract Drawings: Not Used.

13. Liquidated and Special Damages

The **CONTRACTOR** will be subject to liquidated damages in the amount of **\$250** per calendar day that work is not complete after the Final Completion Date.

14. Suspension of Work and Termination

In Paragraph 15.04.A delete the following words: “or Engineer fails to act on any Application for Payment within thirty days, after it is submitted” and add the words “if the”. In Paragraph 15.04.B delete the following words: “if Engineer has failed to act on an Application for Payment within thirty days after it is submitted” and add the words “if the”.

*** * END OF SECTION * ***

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 Location of Work

All of the work of this Contract is located in public right-of-way or on easements and property owned or obtained by the Owner.

1.02 Work to be Done

- A. The CONTRACTOR shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings.
- B. The CONTRACTOR shall perform the work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration required as a result of damages caused during this construction.
- C. All materials, equipment, skills, tools and labor which are reasonably and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the CONTRACTOR without additional compensation, whether specifically indicated in the Contract Documents or not.
- D. The CONTRACTOR shall comply with all county, state, federal, and other codes which are applicable to the proposed construction work.

1.03 General Description of Work to be Performed

- A. The Work included in the Contract shall be as described in the Contract Documents.
- B. All work shall be done as described in the Specifications and as shown on the Drawings, complete, tested and ready for operation.

1.04 Work Sequence

- A. All work to be done under the Contract shall be done with minimum inconvenience to the OWNER. The CONTRACTOR shall coordinate his work with private property owners such that existing drainage, water service, sewer service and garbage pickup and other public services are maintained at all times.
- B. Construct Work in stages to accommodate the OWNER'S use of the premises during the construction period; coordinate the construction schedule and operations with the ENGINEER.
- C. Construct the Work in stages to provide for public convenience. Do not close off public

access until completion of one stage of construction will provide alternative usage.

1.05 Construction Areas

- A. CONTRACTOR shall limit his use of the construction areas for Work and for storage, to allow for:
 - 1. Work by other contractors.
 - 2. OWNER use.
 - 3. Public use.
- B. Coordinate use of work site under direction of ENGINEER.
- C. Assume full responsibility for the protection, security and safekeeping of products under this Contract stored on the site.
- D. Move any stored products, under CONTRACTOR'S control which interfere with operations of the OWNER or other contractors.
- E. Obtain and pay for the use of additional storage or work areas needed for operations.

1.06 Owner Occupancy

- A. OWNER will have full access to and use of all existing sewer facilities during the entire period of construction for the conduct of his normal operations. Cooperate with ENGINEER in all construction operations to minimize conflict and to facilitate OWNER usage.
- B. CONTRACTOR shall at all times conduct his operations as to insure the least inconvenience to the general public.

1.07 Partial Owner Occupancy

The CONTRACTOR shall schedule his operations for completion of portions of the Work, as designated, for the OWNER'S occupancy prior to Substantial Completion of the entire Work.

1.08 Plans and Specifications

- A. Specifications: The Technical Specifications consist of three parts: General, Products, and Execution. The General section contains general requirements which govern the work. The Products and Execution sections modify and supplement these by detailed requirements of the work and shall always govern whenever there appears to be a conflict.
- B. Intent:
 - 1. All work called for in the Specifications applicable to the Contract but not shown on the Plans in their present form or vice versa shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the work is required and shall be performed by the CONTRACTOR as though it were specifically delineated or described at the CONTRACTOR'S expense.
 - 2. The apparent silence of the Specifications as to any detail, or the apparent omission

from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.

- C. Conflict between Drawings and Specifications. Where an obvious conflict exists between the Plans and Specifications, the ENGINEER shall decide which governs and the CONTRACTOR shall comply with the decision. Such decision shall not be grounds for additional payment to the CONTRACTOR, i.e., the CONTRACTOR shall include the price of the most expensive alternative in his bid.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 Description

- A. CONTRACTOR shall furnish all labor, materials, tools, equipment, appurtenances and all services necessary to perform all Work required, at the lump sum or unit prices for the items listed in the Prices Bid Table located in the Bid Proposal.
- B. The pay items listed in the Bid Proposal constitute all of the pay items for the completion of the Contract. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant, services, CONTRACTOR'S or ENGINEER'S field offices, layout surveys, job signs, sanitary requirements, testing, safety devices, approval and record drawings, water supplies, power, removal of waste, watchmen, bonds, insurance, and all other requirements of the Contract Documents. Compensation for all such services, things and materials shall be included in the prices stipulated for the lump sum and unit pay items listed herein.

1.02 Engineer's Estimate of Quantities

The ENGINEER's estimated quantities for unit bid prices, as listed in the Bid Form, are approximate only and are included solely for the purpose of comparison of Bids. The OWNER does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond therewith and reserves the right to increase or decrease any quantity or to eliminate any quantity as OWNER may deem necessary.

1.03 Related Provisions Specified Elsewhere

- A. Payments to CONTRACTOR: Refer to General Conditions and Supplemental Conditions.
- B. Changes in Contract Price: General Conditions and Contract Forms.
- C. Schedule of Values: Section 01026.

1.04 Measurement of Quantities

- A. The measurement and determination of quantities for each pay item will be made in general as prescribed hereinafter and specifically as set out under Method of Measurement and Basis of Payment for each respective pay item section. Actual authorized quantities of work, complete and accepted under the contract, will be measured by the Engineer according to United States standard measures, and in accordance with well recognized engineering practices.
- B. A station when used as a definition or term of measurement will be 100 linear feet.

-
- C. Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures having an area of nine square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered by the Engineer.
 - D. Where the area unit for measurement and payment is specified for erosion control items, the measurements will be taken on the slope of the ground to compute the actual surface area for payment.
 - E. Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
 - F. All items which are measured by the linear foot, such as pipe culverts, guardrail, underdrains, etc., will be measured as specified under the Method of Measurement for the item unless otherwise shown on the plans.
 - G. No payment will be made for unauthorized excavation. Excavation or embankment performed beyond the required neat lines or slope stakes will not be measured for payment unless within tolerances specified or otherwise provided.
 - H. In computing volumes of excavation and embankment, the average end area method will be used, unless otherwise specified.
 - I. When size number is used in the measurement of wire, it will mean the size number specified in AASHTO Designation: M 32.
 - J. The term ton will mean the short ton consisting of 2000 pounds avoirdupois. All materials which are specified for measurement by the ton shall be weighed by competent personnel on approved scales set at locations approved by the Engineer or in the case of prepackaged materials, the manufacturer's bag weight may be used. If material is shipped by rail, the car weight may be accepted provided it is the actual weight of material and not minimum car weight used for assessing freight tariff. However, car weights will not be acceptable for material to be used in mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such time as the Engineer directs, and each truck shall bear a plainly legible identification mark.
 - K. When a complete structure or structural unit, in effect "lump sum" work, is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.
 - L. Volumes of materials computed in cubic yards by the average end area method are designated as "Final Measure" (FM), or "Final Measure - Embankment" (FME). Volumes of materials designated for measurement loose in the vehicle are designated as "Loose Vehicle Measure" (LVM).

-
- M. Volumetric measurement of excavation, embankment, granular materials or similar materials in cubic yards will be made by the methods designated on the plans or in the proposal. For justifiable reasons, such as impracticability of measurement of volumes (usually small) by the designated method, the Engineer may order measurement by another method as follows:
1. Volumes designated for payment by FM may be measured LVM and converted to contract measurement by multiplying the loose measure by 80 percent.
 2. Volumes designated for payment by LVM may be measured in its original position by the average end area method and multiply the FM measure by 125 percent.
 3. Volumes designated for payment by FME may be measured in its original position by the average end area method and multiply the FM measure by 90 percent.
 4. Small volumes of surplus, excess excavation or other small volumes of excavation which are impractical to measure by the average end area method but are designated to be measured by FME may be measured LVM and multiply the loose measure by 72 percent.

When the Engineer orders the use of a conversion factor for converting a unit of measure, the ordered method of measurement shall be deemed acceptable to all parties and shall be final.

- N. When requested by the Contractor and with written approval of the Engineer, material specified to be measured by the cubic yard or ton may be converted to the other measure as appropriate. Factors for this conversion will be determined by the Engineer and agreed to by the Contractor before such method of measurement is used.
- O. All materials measured by the cubic yard LVM shall be hauled in approved vehicles and verified at the point of delivery. Vehicles may be of any size or type acceptable to the Engineer provided the body is of such shape that the capacity may be readily and accurately determined to the whole cubic yard. Unless all vehicles on the work are of uniform capacity, each vehicle must be plainly labeled to indicate its measured capacity. All vehicles shall be legibly numbered for identification.
- P. The vehicles shall be loaded to ensure a water level load when they arrive at the point of delivery. Loads hauled in unapproved vehicles and loads of a quantity less than the measured quantity for the hauling vehicle, will be subject to rejection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01026
SCHEDULE OF VALUES

PART 1 GENERAL

1.01 Requirements Included

The Schedule of Values is an itemized list that establishes the value or cost of each part of the work as defined in Section 01025, Part 1.04. All other work shall be paid according to the Prices Bid Table. It shall be used as the basis for preparing progress payments and may be used as a basis for negotiations concerning additional work or credits which may arise during the construction. Quantities and unit prices may be included in the schedule when approved by or required by the ENGINEER.

1.02 Preparation

- A. Schedule shall show breakdown of labor, materials equipment and other costs used in preparation of the Bid.
- B. Costs shall be in sufficient detail to indicate separate amounts for each Section of the Specifications.
- C. CONTRACTOR may include items for bond, insurance, temporary facilities and job mobilization within the mobilization bid item.
- D. Schedule of Values shall be prepared on 8-1/2 inch by 11 inch white paper.
- E. Use Table of Contents of the Specifications as basis for Schedule format and identify each item with number and title in the Table of Contents. List sub-items of major products or systems as appropriate or when requested by ENGINEER.
- F. When requested by ENGINEER, support values with data that will substantiate their correctness.
- G. The sum of the individual values shown on the Schedule of Values must equal the total Contract Price.
- H. The manner in which overhead and profit are shown shall be supported by the ENGINEER.
- I. Schedule shall show the purchase and delivery costs for materials and equipment that the CONTRACTOR anticipates he shall request payment for prior to their installation.

1.03 Submittal

Submit two copies of Schedule to ENGINEER for approval at least 20 days prior to submitting first application for a progress payment. After review by ENGINEER, revise and resubmit Schedule as required until it is approved.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 Requirements Included

Submit Applications for Payment to the ENGINEER in accordance with the General Conditions and in the form required by the OWNER.

1.02 Format and Data Required

- A. Submit applications typed with itemized Schedule of Values data typed on 8-1/2 inch x 11 inch white continuation sheets.
- B. Provide detailed substantiating data on additional sheets, including paid invoices where applicable.

1.03 Preparation of Application for Progress Payments

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
 - 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
 - 3. Execute certification with signature of a responsible officer of the CONTRACTOR.
- B. Continuation Sheets:
 - 1. Fill in total list of all scheduled component items of work, with item number and scheduled dollar value for each item.
 - 2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored. Round off values to the nearest dollar or as specified for Schedule of Values.
 - 3. List each Change Order executed prior to date of submission by Change Order Number and description.
 - 4. To receive payment for materials stored on site, submit copies of the original paid invoices with the application for payment.

1.04 Substantiating Data for Progress Payments

- A. Provide substantiating data containing suitable information for review of costs requested with the applications for progress reports identifying:
 - 1. The payment item to which the substantiating data applies.
 - 2. Application number and date.
 - 3. Detailed list of enclosures.
 - 4. For stored materials:
 - a. Item number and identification as shown on application.

-
- b. Description of specific material and invoice of delivered material.
 - c. Consolidated inventory of stored materials showing:
 - (1) Materials received.
 - (2) Materials used.
 - d. Additional stored materials may not be claimed upon reaching 75% completion of the total project.
 - e. Stored Materials shall be inventoried jointly prior to each pay request.
- B. Submit one copy of data for each copy of application for payment.
- C. The CONTRACTOR is to maintain an updated set of record drawings in accordance with Section 01720. As a prerequisite for monthly progress payments, the CONTRACTOR is to exhibit the updated record drawings for review by the OWNER and the ENGINEER.
- D. Construction photographs as required by Section 01380 will be submitted with each progress payment and shall be considered a part of that payment request.
- E. Updated construction schedule showing work completed and work projected by month to the completion of the project.

1.05 Preparation of Application for Final Payment

- A. Fill in application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting.

1.06 Submittal Procedure

- A. Submit applications for payment to the ENGINEER at the times stipulated in the General Conditions.
- B. Initially a pencil draft application shall be informally submitted to the ENGINEER who shall review the draft with the CONTRACTOR and make adjustments as appropriate. The CONTRACTOR shall then prepare a formal typed application using the informally approved amounts and submit three (3) complete sets to the ENGINEER.
- C. When the ENGINEER finds the application properly completed and correct, as informally approved, he will transmit it to the OWNER for payment with a copy to the CONTRACTOR.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01030

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 WORKMANSHIP, MATERIAL AND EQUIPMENT

- A. When a particular product is specified or called for, it is intended and shall be understood that the Contractor include those products in his bid. Should the Contractor desire to substitute products which he purports to be equal to those specified, the Contractor shall furnish information as described in Section 00700, General Conditions, The alternative products(s) submitted by the Contractor shall meet the requirements of the specifications and shall, in all respects, be equal to the products specified by name herein.
- B. All apparatus, mechanism, equipment, machinery, and manufactured articles for incorporation into the Work shall be new and unused and the standard products of recognized reputable manufacturers.

1.02 PROVISIONS FOR CONTROL OF EROSION AND POLLUTANTS

Sufficient precautions shall be taken during construction to minimize the runoff of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other materials harmful to humans, fish, or other life, into the ground and surface waters of the state. Contractor will give all notices and comply with all laws, notices, ordinances, rules and regulations applicable to the work, without exception.

1.03 ON-SITE STORAGE

The Contractor's attention is invited to special storage requirements and possible charges for noncompliance of on-site storage requirements for materials and equipment as specified in Section 01600.

1.04 INCLEMENT WEATHER

- A. In the event of inclement weather, or whenever Engineer shall direct, Contractor and Subcontractors will protect carefully the work and materials against damage or injury from the weathers, including sudden rises in flows due to storms outside the immediate construction zone. Damaged Work and materials shall be removed and replaced. If, in the opinion of Engineer, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or Subcontractors to so protect the Work, no additional time for removal and replacement will be given by the Owner.

1.05 WARRANTIES

- A. All work supplied under the Contract shall be warranted for a period of one (1) year or such longer period of time as may be prescribed by any special guarantee required by Change Orders or issued by Subcontractor, suppliers, or manufacturers, from the date of acceptance for operations (beneficial use) by the Owner as specified in Section 01740, Warranties and Bonds.
- B. The work shall be warranted to be free from defects in workmanship, design and materials. If any part of the work should fail during warranty period, it shall be replaced or restored to service at no expense to the Owner.

1.06 CONSTRUCTION CONDITIONS

The Contractor shall strictly adhere to the specific requirements of the governmental units(s) or agency(ices) having jurisdiction over the work. Wherever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.

1.07 PUBLIC NUISANCE

The Contractor shall not create a public nuisance, including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, or excessive noise.

1.08 SUSPENSION OF WORK DUE TO WEATHER

During inclement weather, all work which might be damaged or rendered inferior by such weather conditions shall be suspended. The orders and decisions of the Engineer as to suspensions shall be final and binding. The authority of the Engineer to issue such an order shall not be interpreted as a requirement to do so. During suspension of the work from any cause, the work shall be suitably covered and protected so as to preserve it from injury by the weather. Notwithstanding this provision, it is understood and agreed that the General Conditions shall control.

1.09 RELOCATIONS

The Contractor shall be responsible for the relocation of structures, including, but not limited to, light poles, signs, sign poles, fences, mailboxes, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid.

1.10 SALVAGE

Any existing equipment or materials, including, but not limited to, valves, pipes, fittings, couplings, etc., which are removed or replaced as a result of construction under this project may be designated as salvage by the Engineer and, if so, shall be removed and delivered to the Owner at a location directed by the Engineer.

1.11 PERMITS

Upon notice of award, the Contractor shall immediately apply for all applicable permits not previously obtained by the Owner to do the work from the appropriate governmental agency or agencies. No work shall commence until all applicable permits have been obtained and copies delivered to the Engineer. The costs for obtaining all permits shall be borne by the Contractor.

1.12 HAZARDOUS LOCATION

- A. The existing wet wells, manholes, sewers, force mains, pipes, and other related areas are hazardous locations in that explosive concentrations of sewage gas may be present. The Contractor is cautioned that the above areas, especially the wet well, may be deficient in oxygen. Checks shall be made by the Contractor whenever personnel are working in these areas to insure that adequate ventilation has been provided.
- B. In his operations in hazardous locations, the Contractor shall use spark-proof tools and explosion-proof temporary lighting and shall not use electric power tools, open flame devices, electric welding or any device or methods which might conceivably cause ignition or explosion.
- C. If a working is atmosphere is unsafe, the Contractor shall furnish, install, operate, and later remove such temporary auxiliary ventilating facilities as are necessary to provide a safe atmosphere.
- D. The Contractor shall also instruct and caution his employees and the employees of his subcontractors to avoid smoking while in the hazardous areas. Suitable prominent "No Smoking" signs shall be placed at locations where sewage gas could be present.

1.13 NOTIFICATION OF WORK ON EXISTING FACILITIES

Before commencing work on any of the existing structures or equipment, the Contractor shall notify the Engineer, in writing, at least ten (10) calendar days in advance of the date he proposes to commence such work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01041

PROJECT COORDINATION

PART 1 GENERAL

1.01 Work Progress

The CONTRACTOR shall furnish personnel and equipment which will be efficient, appropriate, and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the contract. If at any time such personnel appear to the ENGINEER to be inefficient, inappropriate, or insufficient for performing the quality of work required or for producing the rate of progress aforesaid, he may order the CONTRACTOR to increase the efficiency, change the character or increase the personnel and equipment, and the CONTRACTOR shall conform to such order at his own expense. Failure of the ENGINEER to give such order shall in no way relieve the CONTRACTOR of his obligations to perform the work at the specified quality and rate of progress.

1.02 Private Land

The CONTRACTOR shall not enter or occupy private land outside of the OWNER'S land, right-of-ways, or servitudes except by written permission of both the OWNER and the Owner of the private land. Such permission shall be obtained by and at the expense of the CONTRACTOR and at no additional cost to the OWNER.

1.03 Work Locations

Work shall be located substantially as indicated on the Drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons.

1.04 Open Excavations

All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The CONTRACTOR shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by the public, OWNER'S and ENGINEER'S personnel, and workmen.

1.05 Test Pits

Test pits for the purpose of locating underground utilities or structures which may interfere with installation of the Work shall be excavated in advance of the Work and backfilled by the CONTRACTOR. Test pits shall be backfilled immediately after their purpose has been satisfied and maintained in a manner satisfactory to the ENGINEER. The costs for such test pits shall be included in the cost of the work for which the test pits benefit.

1.06 Water for Construction Purposes

- A. In locations where public water supply is available, the CONTRACTOR shall purchase water for all construction purposes.
- B. The CONTRACTOR shall make his own arrangements and pay all costs for connections to public water systems and for water used. Existing OWNER supplies or connections shall not be used without prior approval by OWNER.

1.07 Maintenance of Flow

The CONTRACTOR shall maintain the flow of sewers, drains, and water courses interrupted during the progress of the Work, including complete pumped bypass systems where necessary. The CONTRACTOR shall immediately remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the ENGINEER well in advance of the interruption of any flow. All temporary works installed for flow maintenance shall be removed when the permanent work is finished and the areas cleaned and restored to good condition.

1.08 Protection of Construction and Equipment

- A. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed. All portions of the work injured shall be reconstructed by the CONTRACTOR at his own expense.
- B. All structures shall be protected in a suitable manner. Should any parts of the structures become heaved, cracked or otherwise damaged, all such damaged portions of the work shall be completely repaired and made good by the CONTRACTOR at his own expense and to the satisfaction of the ENGINEER. If, in the final inspection of the work, any defects, faults or omissions are found, the CONTRACTOR shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the CONTRACTOR shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein for at least the guarantee period described in the contract.
- C. The CONTRACTOR shall take all necessary precautions to prevent damage to any structure due to water pressure (groundwater or surface water) during and after construction and until such structure is accepted and taken over by the OWNER.
- D. The CONTRACTOR is responsible for security of the site. Security of all equipment, material, tools, machinery, supplies, structures, buildings, vehicles and offices is the responsibility of the CONTRACTOR. Measures to affect job site security and limit unauthorized access, including temporary fencing, security guards, and other measures are the responsibility of the CONTRACTOR at his expense.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01041.1

UTILITIES COORDINATION

PART 1 GENERAL

1.01 UTILITIES

Utilities for the purpose of these specifications shall be considered as including, but not limited to: pipelines, conduits, cables, transmission lines and appurtenances of Public Utilities and those of Special Utility Districts, Cities or Towns, businesses or individuals solely for their own use or for use of their tenants; and storm drains, sanitary sewers, street lighting, traffic signal and fire alarm systems.

1.02 UNDERGROUND INSTALLATIONS

Existing underground pipelines and utilities are indicated on the Drawings only to the extent such information was made available to or discovered by Engineer in preparing drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed by the Owner and the Engineer.

1.03 UTILITIES LOCATED IN CITY RIGHT-OF-WAY

Unless otherwise provided or excepted herein, the removal, adjusting, relocation, or replacement of utility structures or facilities within City right-of-way which may be necessary for construction of the work in accordance with these Contract Documents, shall be at the expense of the Contractor.

It shall be the Contractor's responsibility to protect and maintain those utilities which, in the opinion of the Engineer, do not need to be disturbed in order to accomplish the work required by the contract.

1.04 RELOCATIONS OF EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES, CABLE TV LINES AND WATER LINES

The Contractor shall notify the proper authority of the utility involved when relocation of these lines is required. The Contractor shall coordinate all work by the utility so that the progress of construction will not be hampered.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

The Contractor, when the Notice to Proceed is received, shall notify the owners of utilities affected by the work, the approximate date upon which he will begin work, and shall submit a progress schedule of the proposed work. This shall be deemed sufficient notice if the project progresses

according to the progress schedule submitted with the notification. If changes in the schedule of the work occur, the Contractor shall appraise both the owner of the utility affected and the Engineer so that adjustments in the work schedule of utility can be made. The Contractor shall be responsible for damages to the utility facility and construction delays resulting from failure to notify the utility and the Engineer of changes in procedure or location.

3.02 PROTECTION OF EXISTING UTILITIES

- A. The attention of the Contractor is drawn to the fact that during excavation, the possibility exists of the Contractor encountering various water, gas, telephone, electrical, or other utility lines not shown on the Drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the Owner.
- B. The Contractor shall assume full responsibility for the protection of all utilities, public and private, including poles, services to buildings, gas pipes, water pipes, hydrants, sewers, drains, and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such utilities from injury of any kind. Any damage resulting from the Contractor's operation shall be repaired by him at his expense.

The protection and preservation of utility facilities which are located within the right-of-way, but outside the normal limits of construction, as determined by the Engineer, shall be the responsibility of the Contractor. The Contractor shall be responsible for all damage to utilities which are due to his negligence.

- C. The Contractor shall bear full responsibility for obtaining locations of all underground structures and utilities (including existing water services, drain lines, and sewer). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- D. If, in the opinion of the Engineer, permanent relocation of a utility owned by the City is required, he may direct the Contractor, in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work under Article 10 of the General Conditions. If relocation of a privately owned utility is required, the Contractor will notify the Utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the County and Utility and shall have no claim for delay due to such relocation.
- E. The Contractor shall notify public and private utility companies in writing at least two, but not more than five full days (excluding Saturdays, Sundays, and legal holidays) before excavating near their utilities.

3.03 UTILITIES TO BE ADJUSTED

The owners of utility facilities which require relocation, removal, adjustment or replacement shall, if possible and feasible, perform this work prior to the commencement of the Contractor's work. Where utility work must be done in conjunction with the Contractor's work on the project or in conjunction

with the work of other utilities, arrangements for when, how and where the operation is to proceed shall be worked out among the parties concerned. If disputes arise, the Engineer shall decide the course of action to be taken.

3.04 UTILITIES CONFLICTING WITH OPERATIONS

Those utility facilities which do not conflict with the improvement, but which are obstructions to the operations required for installation or which are obstructions to the operations required for installation of which present unusual difficulty due to their close proximity to the area of the operations, shall be located with certainty by the owners of the utility prior to the arrival of the Contractor's operation which would be hindered by the utility facility. The Contractor is required to preserve the utility facility in place without damage and shall be responsible for damages sustained, if the utility owner has located the facility by exposing it to the view of the Contractor or has otherwise made the Contractor aware, with certainty, of the location of the facility. Any other arrangements that the Contractor may make with a utility owner as a substitute for the requirements of this Section shall require the approval of the Engineer, in writing.

3.05 MISLOCATED UTILITIES

The owner of a utility shall be wholly responsible for the proper location of his facilities which are affected by construction work performed according to these specifications. Improperly located or mislocated facilities which are damaged during construction shall be the responsibility of the utility, providing proper notification has been given.

*** * END OF SECTION * ***

SECTION 01045
CUTTING AND PATCHING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Contractor shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the Work to include:

- A. Make its several parts fit together properly.
- B. Uncover portions of the Work to provide for installation of ill-timed work.
- C. Remove and replace defective work.
- D. Remove and replace work not conforming to requirements of the Contract Documents
- E. Remove samples of installed work as specified for testing.

1.02 SUBMITTALS

- A. Submit a written request to the Engineer well in advance of executing any cutting or alteration which affects:
 - 1. Work of the Owner or any separate contractor.
 - 2. Structural value or integrity of any element of the Project or work.
 - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 4. Efficiency, operational life, maintenance or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- B. Request shall include:
 - 1. Identification of the work.
 - 2. Description of affected work.
 - 3. The necessity for cutting, alteration or excavation.
 - 4. Effect on work of Owner or any separate Contractor, or on structural or weatherproof integrity of work.

-
5. Description of proposed work:
 - a. Scope of cutting, patching, alteration, or excavation.
 - b. Trades who will execute the work.
 - c. Products proposed to be used.
 - d. Extent of refinishing to be done.
 6. Alternatives to cutting and patching.
 7. Cost proposal, when applicable.
- C. Submit written notice to the Engineer designating the date and the time the work will be uncovered.

PART 2 PRODUCTS

2.01 MATERIALS

Comply with specifications and standards for each specific product involved.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions affecting installation of products or performance or work.
- C. Report unsatisfactory or questionable conditions to the Engineer in writing; do not proceed with work until the Engineer has provided further instructions.

3.02 PREPARATION

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of Work.
- B. Provide devices and methods to protect other portions of Project from damage.
- C. Provide protection from elements for the portion of the Project which may be exposed by cutting and patching work, and maintain excavations free from water.

3.03 PERFORMANCE

- A. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.
- C. Employ original installer or fabricator to perform cutting and patching for:
 - 1. Weather-exposed or moisture-resistant elements.
 - 2. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- E. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of Contract Documents.
- F. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

*** * END OF SECTION * ***

SECTION 01050

FIELD ENGINEERING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall provide and pay for field engineering services for:
 - 1. Survey work required in execution of work.
 - 2. Civil, structural, or other professional engineering services specified or required to execute the Contractor's construction method.
- B. The method of field staking for the construction of the work shall be at the option of the Contractor. The Owner shall provide the engineering surveys to establish reference points which in his judgment are necessary to enable the Contractor to proceed with his work.
- C. The accuracy of any method of staking shall be responsibility of the Contractor. All engineering for vertical and horizontal control shall be the responsibility of the Contractor.
- D. The Contractor shall be held responsible for the preservation of all stakes and marks. If any stakes or marks are carelessly or willfully disturbed by the Contractor, the Contractor shall not proceed with any work until he has reestablished such points, marks, lines and elevations as may be necessary for the prosecution of the work.
- E. The Contractor shall retain the services of a competent surveyor, registered in the State of Mississippi, to layout the work and maintain a survey during construction. The Contractor shall be solely responsible for proper location of the work.

1.02 SURVEY REFERENCE POINTS

Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.

- 1. Make no changes or relocations without prior written notice to the Engineer.
- 2. Report to the Engineer when any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.

1.03 PROJECT SURVEY REQUIREMENTS

- A. Establish temporary bench marks as needed, referenced to data established by survey control points. Record locations, with horizontal and vertical data, on Record Drawings.
- B. Establish lines and levels, and locate and lay out, by instrumentation and similar appropriate

means:

1. Site improvements, including utility slopes and invert elevations.
 2. Batter boards for structures.
- C. From time to time, verify layouts by same methods.
- D. Establish all lines and grades prior to construction of site improvements.

1.04 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.
- B. At Contract closeout, submit a survey of installation of water mains, fire hydrants, and valves at the same scale as the Engineer's drawings indicating elevations and channel stationing at 100 foot increments.

1.05 SUBMITTALS

- A. On request of the Engineer, submit documentation to verify accuracy of field engineering work.
- B. Submit Drawings showing locations of all pipes and structures constructed. This Drawing shall be included with the Record Drawings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION(NOT USED)

*** * END OF SECTION * ***

SECTION 01060

REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Abbreviations and acronyms used in Contract Documents to identify reference standards are as indicated herein.

1.02 QUALITY ASSURANCE

- A. Applications: When a standard is specified by references, comply with requirements and recommendations stated in the standard, except when requirements are modified by the Contract Documents, or applicable codes establish stricter standards.
- B. Publications Date: The publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

1.03 ABBREVIATIONS, NAMES, AND ADDRESSES OF ORGANIZATIONS

The following standards may be referenced in the Contract Documents. The contractor shall obtain copies of reference standards directly from the publication source when needed for proper performance of Work or when required for submittal by Contract Documents.

AAN	American Association for Nurserymen 1250 I Street N.W., Suite 500 Washington, DC 20005 (202) 789-2900
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W., Suite 225 Washington, DC 20001 (202) 624-5800
ACI	American Concrete Institute Post Office Box 19150 22400 W. Steven Mile Road Detroit, MI 48219 (313) 532-2600
ACPA	American Concrete Pipe Association 8320 Old Courthouse Road, Suite 201 Vienna, VA 22180 (703) 821-1990
AI	Asphalt Institute

	Asphalt Institute Building College Park, MD 20740-1802
AISC	American Institute of Steel Construction 400 North Michigan Avenue Chicago, IL 60611 (312) 670-2400
AISI	American Iron and Steel Institute 1133 15th Street N.W., Suite 300 Washington, DC 20005 (202) 452-7100
ANSI	American National Standard Institute 1430 Broadway New York, NY 10018 (212) 354-3300
ASCE	American Society of Civil Engineers 345 East 47th Street New York, NY 10017 1-800-548-ASCE 345 East 47th Street New York, NY 10017 (212) 705-7722
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103 (215) 299-5400
AWPA	American Wood Preserver's Association Post Office Box 849 Stevensville, MD 21666 (301) 643-4163
AWS	American Welding Society Post Office Box 351040 550 LeJeune Road, N.W. Miami, FL 33126 1-800-443-9353
AWWA	American Water Works Association 6666 W. Quincy Avenue Denver, CO 80235 (303) 794-7711
CLFMI	Chain Link Fence Manufacturers Institute

	1776 Mass Avenue N.W., Suite 500 Washington, DC 20036 (202) 659-3537
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Road Schaumburg, IL 60173 (312) 517-1200
DIPRA	Ductile Iron Pipe Research Association 245 Rivercase Parkway E., Suite 100 Birmingham, AL 35244 (205) 988-9870
FS	Federal Specification General Services Administration Specifications and Consumer Information & Distribution Section (WFSIS) 7 and D Street S.W., Room 654 Washington, DC 20407 (202) 472-2140
IEEE	Institute of Electrical and Electronic Engineers Service Center 345 E. 47th Street New York, NY 10017 (212) 705-7900
MDOT	Mississippi Department of Transportation P. O. Box 1850 Jackson, Ms 39215-1850 (601) 359-1213
MIL	Department of the Navy Navel Publications and Forms Center 5801 Torbor Avenue Philadelphia, PA 19120-5099 (215) 697-2667
NEC	National Electric Code National Fire Protection Association Batterymarch Park Quincy, MA 02269 (617) 770-3000
NEMA	National Electrical Manufacturer's Association 2101 L Street, NW, Suite 300 Washington, DC 20037 (202) 457-8400
NSPE	National Society of Professional Engineers

	1420 King Street Alexandria, VA 22314 (703) 684-2835
OSCI	Office of Standards Code and Information National Bureau of Standards Gaithersburg, MD 20899 (301) 975-4029
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077 (312) 966-6200
PCI	Prestressed Concrete Institute 175 W. Jackson Blvd., Suite 1859 Chicago, IL 60604 (312) 786-0300
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association Post Office Box 70 Merrifield, VA 22116 (703) 790-9890
SSPC	Steel Structures Painting Council 4400 5th Avenue Pittsburgh, PA 15213 (412) 268-3327
UL	Underwriter's Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062 (312) 272-8800

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01200
PROJECT MEETINGS

PART 1 GENERAL

1.01 Requirements Included

- A. The ENGINEER shall schedule and administer a preconstruction meeting, construction progress meetings, and specially called meetings throughout the progress of the work. The ENGINEER will:
 - 1. Prepare agenda for meetings.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
 - 4. Record the minutes; include significant proceedings and decisions.
 - 5. Reproduce and distribute copies of minutes.
- B. The CONTRACTOR and representatives of, where appropriate, subcontractors and suppliers shall attend meetings. The representative shall be qualified and authorized to act on behalf of the entity each represents.
- C. The CONTRACTOR shall attend and identify at the meetings the actual status of the Contract Work and, when the Work is not being performed consistently with the Contract Documents and construction schedules, shall identify at the meetings the steps he is taking to resolve the inconsistency.

1.02 Pre-construction Meeting

- A. The CONTRACTOR shall participate in a preconstruction meeting to be held after the effective date of the Agreement and prior to the date of Notice to Proceed.
- B. The following are expected to be in attendance:
 - 1. OWNER'S Representative and other staff as appropriate.
 - 2. ENGINEER and his professional consultants as appropriate.
 - 3. ENGINEER's Resident Project Representative.
 - 4. CONTRACTOR's Representative and Construction Superintendent.
 - 5. Subcontractors as appropriate.
 - 6. Utility representatives as appropriate.
 - 7. Others as appropriate.
- C. The following matters are expected to be addressed:
 - 1. Distribution and discussion of:
 - a. List of major subcontractors.
 - b. Project construction schedules.
 - 2. Critical work sequencing.
 - 3. Project Coordination.
 - 4. Designation of responsible personnel.

-
5. Procedures and processing of:
 - a. Field decisions.
 - b. Proposal requests.
 - c. Submittals.
 - d. Change Orders.
 - e. Applications for Payment.
 6. Distribution of Contract Documents.
 7. Procedures for maintaining Record Documents.
 8. Use of premises:
 - a. Office, work and storage areas.
 - b. OWNER'S requirements.
 9. Construction facilities, controls and construction aids.
 10. Temporary utilities.
 11. Housekeeping procedures.
 12. Insurance certifications.
 13. Liquidated damages for delay.
 14. Weekly job meetings.
 15. Laboratory testing of material requirements.

1.03 Construction Progress Meetings

- A. Construction progress meetings will be held monthly with the first meeting 30 days or less after the date of Notice to Proceed.
- B. Special construction progress meetings will be held as required by progress of the Work.
- C. The following are expected to be in attendance:
 1. OWNER Representative and other staff as appropriate.
 2. The ENGINEER and his professional consultants as appropriate.
 3. CONTRACTOR's Representative and/or construction Superintendent.
 4. Subcontractors as appropriate.
 5. Suppliers as appropriate.
 6. Others as appropriate.
- D. The following matters are expected to be addressed:
 1. Review and approve minutes of previous meeting.
 2. Review of work progress.
 3. Field observations, problems, conflicts.
 4. Problems which impede Construction Schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain Construction Schedule.
 7. Revisions to Construction Schedule.
 8. Progress and schedule during succeeding work period.
 9. Payment applications and processing.
 10. Submittals.
 11. Maintenance of quality standards.
 12. Changes, substitutions, and Change Orders.

-
- 13. Review proposed changes for:
 - a. Effect on Construction Schedule and completion date.
 - b. Effect on other contracts of the Project.
 - 14. Other matters as appropriate.
 - 15. Record drawings.
- E. The CONTRACTOR shall be prepared to discuss the above topics and to make commitments for resolving deficiencies.
- F. The CONTRACTOR shall provide a current submittal log at each progress meeting in accordance with Section 01340.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01310
CONSTRUCTION SCHEDULES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall comply with the General Conditions.
- B. Submit revised progress schedules periodically.

1.02 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal bar chart.
 - 1. Provide separate horizontal bar for each trade or operation.
 - 2. Horizontal time scale; identify the first work day of each week.
 - 3. Scale and spacing: To allow for notations and future revisions.
 - 4. Minimum sheet size: 8-1/2 inches by 11 inches.
- B. Format of listings: The table of contents of the Contract Documents.
- C. Identification of listings: Items of work.

1.03 CONTENT OF SCHEDULE:

- A. Construction Progress Schedule:
 - 1. Show the complete sequence of construction by activity.
 - 2. Show the dates for the beginning, and completion of each major element of construction.
 - 3. Show projected percentage of completion for each item, as of the first day of each month.
 - 4. Show an anticipated monthly payment schedule.
- B. Submittal Schedule for Shop Drawings, Product Data and Samples. Show:
 - 1. The dates for Contractor's submittal.
 - 2. The dates approved submittal will be required from the Engineer.

1.04 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
 - 1. Major changes in scope.
 - 2. Activities modified since previous submission.
 - 3. Revised projections of progress and completion.
 - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended, and its effect.

1.05 SUBMISSIONS

- A. Submit initial schedules in accordance with the General Conditions.
 - 1. Engineer will review schedules and return review copy within ten (10) days after receipt.
 - 2. If required, Contractor shall resubmit within seven (7) days after return of review copy.
- B. Submit revised progress schedules with each Application for Payment.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01340

SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

PART 1 GENERAL

1.01 Requirements Included:

- A. The Contractor shall submit to the Engineer for review and exception, if any, such working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
- B. Within fifteen (15) calendar days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer a complete list of preliminary data on items for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way relieve the Contractor from submitting complete shop drawings, data, and samples in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.
- C. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting. This log should include the following items:
 - 1. Submittal Description and Number assigned.
 - 2. Date to Engineer.
 - 3. Date returned to Contractor (from Engineer).
 - 4. Status of Submittal (No exceptions taken, returned for confirmation or resubmittal, rejected).
 - 5. Date of Resubmittal and Return (as applicable).
 - 6. Date material released (for fabrication).
 - 7. Projected date of fabrication.
 - 8. Projected date of delivery to site.
 - 9. Status of O&M manuals submittal.

1.02 Contractor's Responsibility

-
- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp or evidence that the Contractor has not performed the required review will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents.
- B. Determine and verify:
1. Field measurements.
 2. Field construction criteria.
 3. Catalog numbers and similar data.
 4. Conformance with Specifications and indicate all variances from the Specifications.
- C. The Contractor shall furnish the Engineer a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.
- D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him by the Engineer with no exceptions taken.
- E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than twenty-one (21) calendar days for checking and appropriate action from the time the Engineer receives them.
- F. The Contractor shall submit five (5) copies of shop drawings and descriptive or product data submittal to complement shop drawings to the Engineer which will be retained for his use.
- G. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary shop drawings.
- H. The Contractor shall utilize a Sequential Numbering System for submittals (1-999). Resubmittals or confirming material shall be assigned a letter next to the submittal number, i.e. A= second submittal, B= third submittal, etc.
- I. Submittals shall include a certified statement of compliance to the requirements detailed in the specifications in addition to other submittal requirements. This certification shall be prepared by the manufacturer and not the local supplier. Validity of the authority and position of the person signing the certification shall be verified by a Notary Public. The statement of compliance shall address each point of conformance contained in the governing specifications with definite comments of either compliance or non-compliance. Statements of non-compliance with points of conformance shall be accompanied by a statement of

justification as to the reason for non-conformance and why the non-complying feature is considered to be either equal to or better than the specified feature. The Engineer will use the certified statement of compliance in his evaluation of the submittal rendering a judgment as to equality to the specified product and issuing a statement as to whether the product is acceptable for or rejected from incorporation into the work.

- J. When a manufacturer named in the controlling specification is chosen to supply a product and the details of manufacture, size, and installation are shown on this standard catalog cut sheets, the manufacturer may submit the certified statement of compliance as detailed above along with installation details specific to the work such as laying schedules, etc. as required, deleting the standardized catalog data.

1.03 Engineer's Review of Shop Drawings

- A. The Engineer's review of drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation.
- B. The review of drawings and schedules will be general, and shall not be construed:
1. as permitting any departure from the Contract requirements;
 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, omissions and materials;
- C. If the drawings or schedules as submitted describe variations per subparagraph (1.04.D), and show a departure from the Contract requirements which Engineer finds to be in the best interest of the Owner and to be so minor as not to involve a change in Contract Price or Time, The Engineer may return the reviewed Drawings without noting any exception.
- D. After the ENGINEER completes his review, the Shop Drawings will be marked with one of the following notations:
1. No Exceptions Taken.
 2. Make Corrections Noted.
 3. Revise and Resubmit.
 4. Rejected.
 5. Submit Specified Item.
- E. If a submittal is acceptable, it will be marked "No Exception Taken" or "Make Corrections Noted". Three copies of the submittal will be returned to the CONTRACTOR.
- F. Upon return of a submittal marked "No Exception Taken" or "Make Corrections Noted", the CONTRACTOR may order, ship or fabricate the materials included on the submittal, provided it is in accordance with the corrections indicated.
- G. If a Shop Drawing action is "Make Corrections Noted" but has extensive corrections or corrections affecting other drawings or Work, the ENGINEER may require that the CONTRACTOR make the corrections indicated thereon and resubmit the Shop Drawings for

record purposes. In this case, the submittal will be marked "Make Corrections Noted-Resubmit".

- H. If a submittal is unacceptable, two copies will be returned to the CONTRACTOR with one of the following notations:
 - 1. "Revise and Resubmit"
 - 2. "Rejected"
- I. Upon return of a submittal marked "Revise and Resubmit", the CONTRACTOR shall make the corrections indicated and repeat the initial approval procedure. The "Rejected" notation is used to indicate material or equipment that is not acceptable. Upon return of a submittal so marked, the CONTRACTOR shall repeat the initial approval procedure utilizing acceptable material or equipment.
- J. Submittals lacking adequate details or information to allow the ENGINEER to determine whether or not the submittal meets the intent of the Contract specifications shall be marked "Submit Specified Item" and returned without further comment.
- K. Shop Drawings or other submittals not bearing the ENGINEER'S "No Exception Taken" or "Make Corrections Noted" notations shall not be issued to Subcontractors nor utilized for construction purposes. No Work shall be performed or equipment installed without a drawing or submittal bearing one of these notations.
- L. In the event the CONTRACTOR obtains the ENGINEER'S approval for the use of equipment other than that which is shown or specified, the CONTRACTOR shall, at his own expense and using methods approved by the ENGINEER, make all changes to the Work, including structures, piping, electrical, equipment and controls, that may be necessary to accommodate this equipment.
- M. Resubmittals will be handled in the same manner as first submittals. The Contractor shall direct specific attention to revisions other than the corrections requested by the Engineer on previous submissions by written details or markings on the resubmitted Shop Drawings. The Contractor shall make any corrections required by the Engineer.
- N. If the Contractor considers any correction indicated on the Drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.
- O. The Engineer will review a submittal/resubmittal a maximum of three times after which cost of review will be borne by the Contractor. The cost of engineering shall be equal to the Engineer's charges to the Owner under the terms of the Engineer's agreement with the Owner.
- P. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions or approval from the Engineer.

Q. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor, and will be considered "NOT APPROVED" until resubmitted.

1.13 SHOP DRAWINGS

- A. Shop drawings shall be complete and detailed.
- B. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.
- C. Each shop drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
 - 1. Number and title of the drawing.
 - 2. Date of drawing or revision.
 - 3. Name of project building or facility.
 - 4. Name of contractor and subcontractor submitting drawing.
 - 5. Clear identification of contents and location of the work.
 - 6. Specification number and title.
- D. If Drawings show variations from Contract requirements because of standard Shop practice or other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such Drawings have been reviewed.
- E. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material as required. Materials and equipment lists shall give for each item thereon the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish, and all other pertinent data.
- F. The Contractor shall provide a list including the equipment name, address, and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained for all mechanical and electrical equipment furnished.
- G. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required Shop Drawings. The

installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.

- H. Only the Engineer will utilize the color red in marking Shop Drawing submittals.
- I. Before final payment is made, the Contractor shall furnish to Engineer five (5) sets of record shop drawings all clearly revised, complete and up to date showing the permanent construction as actually made for all reinforcing and structural steel, miscellaneous metals, process and mechanical equipment, yard piping, electrical system and instrumentation system.

1.13 Working Drawings

- A. Working drawings shall be considered to mean the Contractor's plans for temporary structures.
- B. Copies of working drawings as noted in subparagraph 1.02, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for work.
- C. The Engineer will not review working drawings but shall use them as information to monitor the work performed by the Contractor.

1.14 Samples

- A. The Contractor shall furnish for the review of the Engineer samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed and the Contractor shall prepay all shipping charges. Materials or equipment for which samples are required shall not be used in work until reviewed by the Engineer.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
 - 2. Name of Contractor and Subcontractor
 - 3. Material or Equipment represented
 - 4. Place of Origin
 - 5. Name of Producer and Brand (if any).
 - 6. Location in Project

(Samples of finished materials shall have additional marking that will identify them under the finished schedules.)

- C. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in subparagraph 1.06B above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer under separate cover and the remaining copy shall be for the Contractor's records. Review of a sample shall be only for the characteristics or use named and shall not be construed to change or modify any Contract requirements.
- D. Reviewed samples not destroyed in testing shall be sent to the Engineer or stored at the site of the work. Reviewed samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the reviewed samples. Samples which failed testing or were rejected will be returned to the Contractor at his expense, if so requested at time of submission.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Contractor will employ and pay for the services of an Independent Testing Laboratory to perform testing specifically indicated on the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.

- A. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.

1.02 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

Laboratory is not authorized to:

- A. Release, revoke, alter or enlarge on requirements of Contract Documents.
- B. Approve or accept any portion of the Work.
- C. Perform any duties of the Contractor.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to Work, to Manufacturer's operations.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other materials mixes which require control by the testing laboratory.
- D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Owner may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.
- E. Furnish incidental labor and facilities:
 - 1. To provide access to Work to be tested.

-
- 2 To obtain and handle samples at the Project site or at the source of the product to be tested.
 3. To facilitate inspections and tests.
 4. For storage and curing of test samples.
- F. Notify laboratory at least 24 hours in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
- G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the Contractor's convenience and as approved by the Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Material and equipment incorporated into the Work shall:

- A. Conform to applicable specifications and standards.
- B. Comply with size, make, type, and quality specified to the greatest extent possible, detailing all aspects and providing explicit reasons for parameters not in compliance and specifically approved in writing by the Engineer.
- C. Manufactured and Fabricated Products:
 - 1. Design, fabricate, and assemble in accord with the best engineering and standard shop practices.
 - 2. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - 3. Two or more items of the same kind shall be produced, by the same manufacturer.
 - 4. Products shall be suitable for service conditions.
 - 5. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
- D. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 APPROVAL OF MATERIALS

- A. Only new materials and equipment shall be incorporated in the Work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the Work without prior approval of the Engineer.
- B. The Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product along with references to the applicable section(s) of the specifications to form an opinion as to its conformity to the specifications. The data shall comply with Paragraph 1.06 of this Section.
- C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the

specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense. Except as otherwise noted, the Contractor will make arrangements for and pay for the tests. Where such tests confirm compliance with the specifications, the Owner will reimburse the actual charges of the testing firm paid by the Contractor.

- D. Contractor shall submit data and samples sufficiently early to permit consideration, approval, manufacture, and delivery of materials before they are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against the Owner or the Engineer.
- E. The materials and equipment used in the Work shall correspond to the approved samples or other data.

1.03 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

- A. When Contract Documents require that installation of the Work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including five copies to the Engineer. One complete set of the installation instructions shall be available for use on the job site during and through completion of the Work.
- B. Handle, install, connect, clean, condition and adjust products as required by the manufacturer's instructions and in conformity with specified requirements.
 - 1. Should the specified requirements conflict with the manufacturer's instructions, the manufacturer's instructions shall have priority unless changes are authorized in writing by the manufacturer.
 - 2. Should job conditions conflict with the manufacturer's instructions, consult with the manufacturer for clarification.
 - 3. Clarifications of installation instructions shall be issued only by the manufacturer, shall be in writing, and shall be distributed to all parties involved in the installation as stated above and prior to alteration of the installation procedures.
 - 4. Do not proceed with the Work without clear instructions concerning the specific installation procedures.
- C. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by the manufacturer.

1.04 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of Products as required by the currently approved construction schedule coordinating each delivery to avoid conflict with other work and conditions at the site.
 - 1. Deliver Products in a undamaged condition, in the manufacturer's original containers or packaging and with identifying labels intact and legible.
 - 2. Prior to accepting delivery, inspect shipments to assure compliance with approved submittal, and that the Products have been properly protected and are undamaged.
- B. Provide equipment and personnel to handle Products preventing soiling or damage to the Products or their protective packaging.

1.05 STORAGE AND PROTECTION

- A. Store Products in accord with manufacturer's instruction, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weathertight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 - 3. Store fabricated products above the ground, on blocking or skids, prevent spoiling, staining or corrosion. Cover products which are subject to deterioration with impervious sheet coverings and provide adequate ventilation to avoid condensation.
 - 4. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- B. All materials and equipment to be incorporated in the Work shall be handled and stored in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and other injury, theft or damage.
- C. Cement and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All miscellaneous steel, structural steel and reinforcing steel shall be stored off the ground, kept free of accumulations of dirt and grease, and in areas free of standing water to minimize rusting. Precast concrete sections shall be handled and stored in a manner to prevent staining, chipping or cracking. Brick, block and similar masonry products shall be handled and stored in a manner to reduce staining, breaking, chipping, cracking, and spalling.
- D. All materials which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended, including aesthetics, shall be promptly removed from the site of the work.
- E. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections and exercise or rotate moving parts of stored products as required by the

manufacturer to assure that products are maintained under specified conditions and free from damage or deterioration.

- F. Provide substantial coverings as necessary to protect installed products from damage caused by traffic and subsequent construction operations. Remove the protective covering when no longer needed.
- G. The Contractor shall be responsible for all material, equipment, and supplies sold and delivered to the Owner under this Contract until final inspection of the Work and acceptance thereof by the Owner. In the event any such material, equipment, and supplies are lost, stolen, damaged, or destroyed prior to final inspection and acceptance they shall be replaced by the Contractor.
- H. Should the Contractor fail to take proper action to properly store and handle equipment supplied under this Contract, the Owner retains the right to notify the Contractor in writing of the deficiencies, to correct all deficiencies and deduct the cost associated with these corrections from the contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administration, clerical, engineering and any other costs associated with making the necessary corrections.

1.06 SUBSTITUTIONS AND PRODUCT OPTIONS

A. Products List:

Within fifteen (15) days after the Notice to Proceed, submit to the Engineer complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor.

B. Contractor's Options:

- 1. For Products specified only by reference standard, select any product meeting that standard.
- 2. For Products specified by naming one or more Products or manufacturers and "or equal", Contractor must submit a request as for substitutions for any Product or manufacturer not specifically named.

C. Substitutions:

- 1. For a period of thirty (30) days after the Effective Date of the Agreement, the Engineer will consider written requests from Contractor for substitution of Products.

-
2. Submit a separate request for each Product, supported with complete data, with drawings and samples as appropriate, including:
 - a. Comparison of the qualities of the proposed substitution with that specified.
 - b. Changes required in other elements of the work because of the substitution.
 - c. Effect on the construction schedule.
 - d. Cost data comparing the proposed substitution with the Product specified.
 - e. Any required license fees or royalties.
 - f. Availability of maintenance service, and source of replacement materials.
 3. The Engineer shall be the judge of the acceptability of the proposed substitution.

D. Contractor's Representation:

A request for a substitution constitutes a representation that Contractor:

1. Has investigated the proposed Product and determined that it is equal to or superior in all respects to that specified.
2. Will provide the same warranties or bonds for the substitution as for the Product specified.
3. Will coordinate the installation of an accepted substitution into the Work, and make such other changes as may be required to make the Work complete in all respects.
4. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

1.07 SPECIAL TOOLS

Manufacturers of equipment and machinery shall furnish any special tools required for normal adjustment, operations and maintenance, together with instructions for their use. The Contractor shall preserve and deliver to the Owner these tools and instructions in good order no later than upon completion of the Contract.

1.08 WARRANTY

For all major pieces of equipment, submit a warranty from the equipment manufacturer. The manufacturer's warranty period shall be concurrent with the Contractor's as stipulated in the specifications for each piece of equipment.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01630

SUBSTITUTIONS

PART 1 GENERAL

1.01 General

Requests for review of a substitution shall conform to the requirements of Article 6.05 of the General Conditions and shall contain complete data substantiating compliance of proposed substitution with Contract Documents.

1.02 Substitutions

- A. During a period of 60 days after execution of Contract, ENGINEER will consider written requests from CONTRACTOR for substitution of products or construction methods (if specified).
 - 1. After end of specified period, requests will be considered only in case of unavailability of products or other conditions beyond control of CONTRACTOR.
 - 2. If the CONTRACTOR proposes to use products other than named manufacturers in the technical Specification, the ENGINEER reserves the right to require the CONTRACTOR to submit information within the first 30 days after the NOTICE TO PROCEED verifying that the proposed equipment will comply with the Specifications.
- B. Requests for review of a substitution shall conform to the requirements of Article 6.05 of the General Conditions, and shall contain complete data substantiating compliance of proposed substitution with the Contract Documents.
- C. In making request for substitution, CONTRACTOR represents:
 - 1. CONTRACTOR has investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.
 - 2. CONTRACTOR will provide the same or better warranties or bonds for proposed substitution as for product or method specified.
 - 3. CONTRACTOR waives all claims for additional costs or extension of time related to proposed substitution that subsequently may become apparent.
- D. Proposed substitutions will not be accepted if:
 - 1. They are only shown or implied on the Shop Drawings.
 - 2. Acceptance will require substantial revision of Contract Documents.
 - 3. They will change design concepts or Specifications.
 - 4. They will delay completion of the Work, or the work of other contractors.
- E. The ENGINEER will determine whether substitute brands or products are equal to those specified in the Contract Documents. No substitute will be ordered or installed without the ENGINEER'S prior written acceptance.
- F. The OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a

special performance guarantee or other surety with respect to any substitute.

- G. If the ENGINEER determines that a proposed substitute is not equal to that specified or described in the Drawings or Specifications, CONTRACTOR shall furnish one of the brands or products specified or described, at no additional cost to the OWNER.
- H. Engineering Costs:
1. The ENGINEER will record all time required in evaluating substitutions proposed by CONTRACTOR and in making any change in the Drawings or Specifications occasioned thereby. Whether or not the ENGINEER accepts a proposed substitute CONTRACTOR will reimburse the OWNER for the actual cost of the ENGINEER for evaluating any proposed substitute which either does not meet the requirements of the Drawings and Specifications, or the acceptance of which would require changes to other portions of the Work.
 2. CONTRACTOR shall reimburse OWNER for all associated engineering costs, including redesign, additional shop drawing reviews, investigations, consultant fees and revision of the Contract Documents required because of the substitution.
- I. The time required by the ENGINEER to evaluate and either accept or reject proposed substitutes is included in the Contract Time and no extension of the Contract Time shall be allowed therefore.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01710

CLEANING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Cleaning shall include daily "policing" of the work and surrounding areas to clear general debris waste paper, wood scraps, broken concrete, loose riprap, and other objectionable material along with the final cleanup of site(s) required for project acceptance. **DAILY CLEANUP IS REQUIRED.**

1.02 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the Work, the site and adjacent properties, free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide onsite containers for the collection of waste materials, debris and rubbish. All waste materials including containers, food debris and other miscellaneous materials must be disposed of daily in onsite containers.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.02 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- D. Prior to final completion or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas to verify that the entire Work is clean.

**** END OF SECTION ****

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Maintain at the site for the Owner one record copy of:

- A. Conformed Drawings.
- B. Conformed Specifications.
- C. Change Orders and other Modifications to the Contract.
- D. Engineer's Field Orders or written instructions.
- E. Approved Shop Drawings, Working Drawings and Samples.
- F. Field Test records.
- G. Construction photographs.
- H. Latest, Approved Progress Schedule.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in a manner and location to prevent damage.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI section numbers.
- C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the Owner.
- E. As a prerequisite for monthly progress payments, the Contractor is to exhibit the currently updated "record documents" for review by the Owner.

1.03 MARKING DEVICES

Provide felt tip marking pens for recording information in the color code designated by the Owner.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" with rubber stamp.
- B. Record information concurrently with construction progress and do not conceal any work until required information is recorded.
- C. Legibly mark drawings to record actual construction:
 - 1. The Contractor shall use the following color code in marking Contract Drawings:
 - a. Yellow for no change.
 - b. Red to indicate additions, deletions and changes.
 - 2. Elevations of various structure elements in relation to elevation datum.
 - a. Elevations referenced to control points established by the Owner's agent.
 - b. Specifically, elevations of drainage culvert inverts, ditch grades, top of roadway and driveway curbs, bridges, etc.
 - 3. Location of internal utilities and appurtenances concealed in the construction by referencing to visible and accessible features of the structure.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by Field Order or by Change Order.
 - 6. Details not on original contract drawings.
- D. Specifications and Addenda; Legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.
- E. Shop Drawings (after final review):

-
- F. Certified site survey and line elevations and stationing at 100 foot increments and all points of change of direction of channel improvements (Section 01050) by a registered land surveyor.

1.05 SUBMITTAL

- A. At Contract close-out, deliver Record Documents to the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each Record Document.
 5. Signature of Contractor or his authorized representative.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION(NOT USED)

*** * END OF SECTION * ***

SECTION 01740

WARRANTIES AND BONDS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds, as in Articles 5 and 13 of the General Conditions.
- B. Co-execute submittals when so specified.
- C. Review submittals to verify compliance with Contract Documents.
- D. Submit to the Owner for review.

1.02 SUBMITTAL REQUIREMENTS

- A. Assemble and include warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, couplers, and subcontractors including effective dates.
- B. Number of original signed copies required. Two (2) each.
- C. Table of Contents. Neatly typed in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning warranty, and bond.
 - 5. Duration of warranty.
 - 6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty or bond.
 - 7. Contractor, name of responsible principal, address and telephone number.

1.04 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2-inches x 11-inches, punch sheets for standard 3-post binder.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS." List:
 - a. Title of Project.
 - b. Name of Contractor.
- C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of 2-inches, "D" ring.

1.05 WARRANTY SUBMITTAL REQUIREMENTS

- A. For all components of the work, unless stated otherwise in the specifications for each individual item of equipment, submit a written warranty from the manufacturer to replace promptly any component thereof which, in the sole opinion of the Engineer, has defects in design, workmanship, materials, or performance within a one (1) year period following the date of acceptance for operation (Substantial Completion) by the Owner. The manufacturer's warranty period shall be concurrent with the Contractor's for one (1) year, unless otherwise specified, commencing at the time of acceptance for operation (beneficial use) by the Owner and shall be read in conjunction with the Contractor's warranty which shall operate together to provide for replacement of defective components and restoration of proper operation. The Contractor shall be solely responsible for both warranties.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-227-10

CODE: (IS)

DATE: 01/25/2012

SUBJECT: Hydroseeding

Section 907-227, Hydroseeding, is hereby added to and made part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-227--HYDROSEEDING

907-227.01--Description. This work consists of furnishing, transporting, placing, plant establishment and all work necessary to produce a satisfactory and acceptable growth of grass. The seeds, fertilizers, tackifier, and mulch shall be incorporated using the hydroseeding process. These items shall be combined into a mixture and force-applied to the areas to be grassed.

907-227.02--Materials. The Contractor shall, prior to application, furnish the Engineer with invoices of all materials used in the grassing operation.

907-227.02.1--Fertilizers. Fertilizers for purposes of these specifications shall be understood to include standard manufactured products consisting of single or combination ingredients.

All fertilizers shall comply with the State fertilizer laws and Subsection 715.02.

907-227.02.2--Seeds. Seeds shall meet the requirements of Subsection 715.03, subject to the provisions of this subsection. The Contractor shall acquire seed from persons registered with the Mississippi Department of Agriculture and Commerce.

Except for the germination requirements, bags of seeds properly labeled or tagged according to law and indicating characteristics meeting or exceeding the requirements of Subsection 715.03 will be acceptable for planting.

The Contractor should provide adequate dry storage facilities for seeds, and shall furnish access to the storage for sampling stored seed.

907-227.02.3--Mulching. The rate of application of fiber mulch shall be as recommended by the manufacture of the fibers mulch.

907-227.02.3.1--Wood Fiber Mulch. Wood fiber mulch shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed and fertilizer to form a homogeneous slurry. The fibers shall intertwine physically to form a strong moisture-holding mat on the ground surface and allow rainfall to percolate the underlying soil. The fiber material shall be heat processed so as to

contain no germination or growth-inhibiting factors. The mulch shall be dyed an appropriate color to facilitate the application of material using non-toxic dye.

907-227.02.3.2--Cellulose Fiber Mulch. Cellulose fiber mulch consist of recycled paper stock products which are shredded into small pieces particular for application by hydraulic seeding equipment. It shall mix readily and uniformly under agitation with water and blend with grass seed and fertilizer to form a homogeneous slurry. When applied to the ground surface, the material shall form a strong moisture-holding mat, allow rainfall to percolate the underlying soil, and remain in place until the grass root system is established. The material shall contain no growth inhibiting characteristic or organisms. The mulch shall be dyed an appropriate color to facilitate the application of material using non-toxic dye.

907-227.02.3.3--Wood/Cellulose Fiber Mulch. Wood/cellulose fiber mix hydroseeding mulch shall consist of a combination of the above wood and cellulose fibers at a ratio recommended by the manufacturer of the products.

907-227.02.3.4--Straw Mulch. Straw mulch shall consist of a natural straw fiber. This material shall be a minimum 90% straw and essentially free from plastic materials or other non-bio degradable substances. The material shall be disperse into a uniform mulch slurry when mixed with water.

907-227.02.3.5--Tackifier. The tackifier will serve the purpose of an adhesive to form a bond between the soil, fiber, and seed particles. It will also allow the soil to retain moisture.

The tackifier shall be of the organic or synthetic variety.

907-227.03--Construction Requirements.

907-227.03.1--Ground Preparation. Light ground preparation consists of plowing, loosening, and pulverizing the soil to form suitable beds for seeding items in reasonably close conformity with the established lines and grades without appreciable humps or depressions. Unless otherwise specified, the pulverized and prepared seedbed should be at least four inches deep and shall be reasonably free of large clods, earth balls, boulders, stumps, roots and other objectionable matter. The Engineer may eliminate or alter the requirements for ground preparation due to site conditions.

907-227.03.2--Fertilizing. The Contractor shall furnish all equipment necessary to properly handle, store, uniformly spread, and incorporate the specified application of fertilizer.

The Contractor shall incorporate bag fertilizer at a rate of 1000 pounds per acre of 13-13-13 commercial fertilizer. The equivalent rate of other type fertilizers will be allowed if the equivalent percentages of Nitrogen, Phosphorus and Potassium are obtained. Any changes in the type or rate of application of the fertilizers shall be approved by the Engineer prior to being incorporated.

Agricultural limestone will be incorporated into the area and paid for in accordance with Section 213 of the Standard Specifications.

907-227.03.3--Seeding.

907-227.03.3.1--General. The Contractor shall use the vegetation schedule in the plan for the correct types of seed and application rates, unless otherwise noted or approved by the Engineer.

When a vegetation schedule for permanent grass is not shown in the plans, the following types of seed and application rates shall be used, unless otherwise approved by the Engineer.

Bermudagrass -----	20 pounds per acre
Bahiagrass -----	25 pounds per acre
Tall Fescue -----	15 pounds per acre
Crimson Clover -----	20 pounds per acre

At the completion of the project, a satisfactory growth of grass will be required. The Contractor should reference Subsection 210 for satisfactory growth and coverage of dormant seed.

907-227.03.3.2--Plant Establishment. The Contractor should provide plant establishment on all areas seeded until release of maintenance. Plant establishment shall consist of preserving, protecting, watering, reseeding, mowing, and other work necessary to keep the seeded areas in satisfactory condition.

Plant establishment should be provided for a minimum period of 45 calendar days after completion of seeding. In the event satisfactory growth and coverage has not been attained by the end of the 45-day period, plant establishment should be continued until a satisfactory growth and coverage is provided for at least one kind of plant. The Contractor should reference Section 210 of the Standard Specifications for more information.

907-227.03.3.3--Growth and Coverage. It shall be the Contractor's responsibility to provide satisfactory growth and coverage of grasses, legumes, or combination produced from the specified seeding.

Growth and coverage on seeded areas will be considered to be in reasonably close conformity with the intent of the contract when the type of vegetation specified, exclusive of that from seeds not expected to have germinated and shows growth at that time, has reached a point of maturity where stems or runners overlap adjacent similar growth in each direction over the entire area.

Final acceptance of the project will not be made until a satisfactory growth of grass has been acknowledged by the Engineer.

907-227.03.4--Mulching. At the Contractor's option, mulch may be wood fiber, cellulose fiber, a mixture of wood and cellulose fibers, or straw fiber. The mulch shall be applied at the rate recommended by the manufacturer in a mixture of water, seed and fertilizer. Any changes in the rate of application of the mulch shall be approved by the Engineer prior to its use.

907-227.03.5--Equipment. Hydraulic equipment shall be used for the application of fertilizers, seeds and slurry of the prepared mulch. This equipment shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix slurry of the specified amount of fiber, fertilizer, seed and water. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with a set of hydraulic spray nozzles, which will provide even distribution of the slurry on the various areas to be seeded.

The seed, fertilizer, mulch and water shall all be combined into the slurry tank for distribution of all ingredients in one operation as specified herein. The materials shall be combined in a manner recommended by the manufacturer. The slurry mixture shall be so regulated that the amounts and rates of application shall result in a uniform application of all materials at rates not less than the amounts specified. Using the color of the mulch as a guide, the equipment operator shall spray the prepared seedbed with a uniform visible coat. The slurry shall be applied in a sweeping motion, in an arched stream, so as to fall like rain, allowing the mulch to build upon each other until an even coat is achieved.

907-227.03.6--Protection and Maintenance. The Contractor should maintain and protect seeded areas until release of maintenance of the project. The Contractor should take every precaution to prevent unnecessary foot and vehicular traffic.

The Contractor should mow or otherwise remove or destroy any undesirable growth on all areas mulched to prevent competition with the desired plants and to prevent reseeding of undesirable growth.

907-227.04--Method of Measurement. Hydroseeding, complete and accepted, will be measured by the acre. No separate payment will be made for ground preparation, seeds, fertilizers, or mulch. Acceptance will be based on a satisfactory growth and coverage of seeds planted.

Agricultural limestone shall be measured and paid for under Section 213 of the Standard Specifications.

907-227.05--Basis of Payment. Hydroseeding, measured as prescribed above, will be paid for at the contract unit price per acre, which will be full compensation for all required materials, equipment, labor, testing and all work necessary to establish a satisfactory growth of grass.

Payment will be made under:

907-227-A: Hydroseeding

- per acre

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-237-4

CODE: (SP)

| DATE: 03/13/2012

SUBJECT: Wattles

Section 907-237, Wattles, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-237 - WATTLES

907-237.01--Description. This work consists of furnishing, constructing and maintaining wattles for the retention of soil around inlets, swale areas, small ditches, sediment basins and other areas as necessary. Also, the work includes removing and disposing of the wattles and silt accumulations.

Measurement and payment for wattles will be made only when a pay item is included in the bid schedule of the proposal. The quantity is estimated for bidding purposes only and will be dependent upon actual conditions which occur during construction of the project.

| **907-237.02--Materials.** Wattles used around inlets shall have a diameter of twelve inches (12") and a length adequate to meet field conditions. Wattles used at other locations shall have a diameter of twenty inches (20") and a length adequate to meet field conditions. The minimum diameter for the above wattle sizes shall be one inch (1") less than the specified diameter.

The stakes used in securing the wattles in place shall be placed approximately three feet (3') apart throughout the length of the wattle. Stakes shall be wooden and of adequate size to stabilize the wattles to the satisfaction of the Engineer.

In addition to the requirements of this specifications, wattles shall be listed on the Department's "Approved Sources of Materials".

907-237.03--Construction Requirements.

907-237.03.1--General. The wattles shall be constructed at the locations and according to the requirements shown on the erosion control plan.

907-237.03.2--Maintenance and Removal. The Contractor shall maintain the wattles and remove and dispose of silt accumulations.

When the wattles are no longer needed, they shall be removed and the Contractor shall dispose of silt accumulations and treat the disturbed areas in accordance with the contract requirements.

907-237.04--Method of Measurement. Wattles of the size specified will be measured per linear foot.

907-237.05--Basis of Payment. Wattles, measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for installation, maintaining and removal of the wattles, the removal and disposal of silt accumulations and any required restoration of the disturbed areas.

Payment will be made under:

907-237-A: Wattles, Size

- per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-304-13

CODE: (SP)

DATE: 06/06/2012

SUBJECT: Granular Courses

Section 907-304, Granular Courses, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-304.02--Materials. After the first paragraph of Subsection 304.02.1 on page 183, add the following.

Crushed concrete meeting the requirements of Subsection 907-703.04.3 may be used in lieu of granular courses or crushed stone courses specified in the contract. This applies to base courses, shoulders, or other required construction on a prepared foundation.

907-304.03--Construction Requirements.

907-304.03.5--Shaping, Compacting and Finishing. Delete the sixth paragraph of Subsection 304.03.5 on page 185.

Delete the first table in Subsection 304.03.5 on page 186 and substitute the following.

Granular Material	Lot	Individual
<u>Class</u>	<u>Average</u>	<u>Test</u>
7,8,9 or 10	97.0	93.0
5 or 6	99.0	95.0
3 or 4	100.0	96.0
1 or 2	102.0	98.0
Crushed Courses*	99.0	95.0

* When placed on filter fabric on untreated subgrade, the individual tests and the average of the five (5) tests shall equal or exceed the following values.

<u>Lot Average</u>	<u>Individual Test</u>
96.0	92.0

907-304.05--Basis of Payment. Add the “907” prefix to the pay items listed on page 187.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-401-7

CODE: (SP)

DATE: 12/02/2014

SUBJECT: Asphalt Pavements

Section 401, Hot Mix Asphalt (HMA) - General, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby deleted and replaced as follows.

SECTION 907-401 - ASPHALT PAVEMENT -- GENERAL

907-401.01--Description. These specifications include general requirements that are applicable to all types of asphalt whether producing Hot Mix Asphalt (HMA) mixtures or Warm Mix Asphalt (WMA) mixtures. These specifications also include the specific requirements for each particular mixture when deviations from the general requirements are necessary.

This work consists of the construction of one or more lifts of asphalt pavement in accordance with these specifications and the specific requirements for the mixture to be produced and in reasonably close conformity with the lines, grades, thicknesses and typical sections shown on the plans or established by the Engineer.

907-401.01.1--Definitions.

Maximum Sieve Size - Maximum sieve size is the smallest sieve size at which 100 percent of the aggregate passes.

Nominal Maximum Sieve Size - The nominal maximum sieve size is one sieve size larger than the first sieve to retain more than 10 percent of the aggregate.

Maximum Density Line - The maximum density line is a straight line plot on the FHWA 0.45 power gradation chart which extends from the zero origin point of the chart through the plotted point of the combined aggregate gradation curve on the nominal maximum sieve size.

Mechanically Fractured Face - An angular, rough, or broken surface of an aggregate particle created by crushing as determined by ASTM Designation: D 5821.

907-401.02--Materials.

907-401.02.1--Component Materials.

907-401.02.1.1--General. Component materials will be conditionally accepted at the plant subject to later rejection if incorporated in a mixture or in work which fails to meet contract requirements.

907-401.02.1.2--Aggregates. The source of aggregates shall meet the applicable requirements of Section 703.

907-401.02.1.2.1--Coarse Aggregate Blend. Mechanically fractured faces by weight of the combined mineral aggregate coarser than the No. 4 sieve:

<u>Mixture</u>	<u>Percent Fractured Faces, minimum</u>
25-mm	70, one-face
19-mm *	80, one-face
12.5-mm	90, two-face
9.5-mm	90, two-face
4.75-mm	90, two-face

- * When used on routes requiring polymer modified asphalt, the top intermediate lift (19-mm mixture), including travel lane and adjacent lane, shall have at least 90 percent two fractured faces minimum. When placed on an existing Portland Cement Concrete surface, all intermediate lifts (19-mm mixture) shall have at least 90 percent fractured two faces minimum.

The maximum percentage by weight of flat and elongated particles, for all mixes other than 4.75-mm, maximum to minimum dimension greater than 5, shall not exceed 10% for all mixtures. This shall be determined in accordance with ASTM Designation: D 4791, Section 8.4, on the combined mineral aggregate retained on the 3/8" sieve.

907-401.02.1.2.2--Fine Aggregate Blend. Of all the material passing the No. 8 sieve and retained on the No. 200 sieve, not more than 60 percent shall pass the No. 30 sieve.

Uncrushed natural sand shall pass the 3/8" sieve and may be used, excluding the content in RAP, in the percentages of the total mineral aggregate by weight set out in the following table:

Mixture	Maximum Percentage of Natural Sand by Total Weight of Mineral Aggregate		
	HT	MT	ST
25-mm	10	10	20
19-mm	10	10	20
12.5-mm	10	10	20
9.5-mm	10	10	10
4.75-mm	25	30	35

907-401.02.1.2.3--Combined Aggregate Blend.**Design Master Range**

Mixture:	25-mm	19-mm	12.5-mm	9.5-mm	4.75-mm
Nominal Maximum Sieve Size:	1 inch	3/4 inch	1/2 inch	3/8 inch	1/4 inch
Sieve Size	Percent Passing				
1½ inch	100				
1 inch	90-100	100			
¾ inch	89 max.	90-100	100		
½ inch	-	89 max.	90-100	100	100
3/8 inch	-	-	89 max.	90-100	95-100
No. 4	-	-	-	89 max.	90-100
No. 8	16-50	18-55	20-60	22-70	-
No. 16	-	-	-	-	30-60
No. 200	4.0-9.0	4.0-9.0	4.0-9.0	4.0-9.0	6.0-12.0

For MT and HT mixtures, the combined aggregate gradation of the job mix formula, when plotted on FHWA 0.45 power chart paper, shall fall entirely below the Maximum Density Line on all sieve sizes smaller than the No. 4 sieve. However, MT and HT mixtures having a minimum fine aggregate angularity index of 44.0, per ASTM Designation: C1252, Method A, may be designed above the maximum density line.

The 9.5-mm mixtures shall have a minimum fine aggregate angularity of 44.0 for HT and MT mixtures and 40.0 for ST mixtures when tested on combined aggregate in accordance with ASTM Designation: C1252 Method A. The 4.75-mm mixtures shall have a minimum fine aggregate angularity of 45.0 for all design levels when tested on combined aggregate in accordance with ASTM Designation: C 1252, Method A.

The minus No. 40 fraction of the combined aggregate shall be non-plastic when tested according to AASHTO Designation: T 90. The clay content for the combined aggregate for underlying layers shall not exceed 1.0 percent, and for the top layer shall not exceed 0.5 percent by weight of the total mineral aggregate when tested according to AASHTO Designation: T 88.

907-401.02.1.3--Bituminous Materials. Bituminous materials shall meet the applicable requirements of Section 702 for the grade specified.

Tack coat shall be the same neat grade asphalt cement used in the mixture being placed or those materials specified for tack coat in Table 410-A on the last page of Section 410. Emulsified asphalt shall not be diluted without approval of the Engineer.

907-401.02.1.4--Blank.

907-401.02.1.5--Hydrated Lime. Hydrated lime shall meet the requirements of Subsection

714.03.2 for lime used in soil stabilization.

907-401.02.1.6--Asphalt Admixtures. Additives for liquid asphalt, when required or permitted, shall meet the requirements of Subsection 702.08.

907-401.02.1.7--Polymers. Polymers for use in polymer modified asphalt pavements shall meet the requirements of Subsection 702.08.3.

907-401.02.2--WMA Products and Processes. The Department will maintain a list of qualified WMA products and processes. No product or process shall be used unless it appears on this list.

The Contractor may propose other products or processes for approval by the Product Evaluation Committee. Documentation shall be provided to demonstrate laboratory performance, field performance, and construction experience.

907-401.02.3--Composition of Mixtures.

907-401.02.3.1--General. Unless otherwise specified or permitted, the asphalt shall consist of a uniform mixture of asphalt, aggregate, hydrated lime and, when required or necessary to obtain desired properties, antistripping agent and/or other materials.

The total amount of crushed limestone aggregate for mixtures, excluding shoulders, when used in the top lift, shall not exceed 50 percent of the total combined aggregate by weight.

Hydrated lime shall be used in all asphalt at the rate of one percent (1%) by weight of the total dry aggregate including aggregate in RAP, if used. The aggregate, prior to the addition of the hydrated lime, shall contain sufficient surface moisture. If necessary, the Contractor shall add moisture to the aggregate according to the procedures set out in Subsection 907-401.03.2.1.2.

The Contractor shall obtain a shipping ticket for each shipment of hydrated lime. The Contractor shall provide the District Materials Engineer with a copy of each shipping ticket from the supplier, including the date, time and weight of hydrated lime shipped and used in hot mix asphalt production. An amount equal to twenty-five percent (25%) of the total value of asphalt items performed during the initial estimate period in which the Contractor fails to submit the hydrated lime shipping tickets to the District Materials Engineer will be withheld from the Contractor's earned work. Non-conformance with this specification for successive estimate period(s) will result in the total value (100%) of asphalt items performed during this period(s) being withheld from the Contractor's earned work. Monies withheld for this non-conformance will be released for payment on the next monthly estimate following the date the submittal of hydrated lime shipping tickets to the District Materials Engineer is brought back into compliance with this specification.

Mixtures will require the addition of an antistripping agent when the Tensile Strength Ratio (MT-63) and/or the Boiling Water Test (MT-59) fail to meet the following criteria.

Tensile Strength Ratio (TSR - MT-63)

Wet Strength / Dry Strength 85 percent minimum

Interior Face Coating 95 percent minimum

Boiling Water Test (MT-59)

Particle Coating 95 percent minimum

Reclaimed asphalt pavement (RAP) materials may be used in the production of asphalt in the percentages of the total mix by weight set out in the following table:

Asphalt Mixture	Maximum Percentage of RAP by total weight of mix
4.75-mm	0
9.5-mm	20 *
12.5-mm Surface Lift	20 *
12.5-mm Underlying Lift	30
19-mm	30
25-mm	30

- * At a minimum, RAP shall be processed and/or screened such that the RAP material size does not exceed the nominal maximum sieve size for the mixture specified.

During asphalt production, the RAP shall pass through a maximum 2-inch square sieve located in the asphalt plant after the RAP cold feed bin and prior to the RAP weighing system.

Crushed reclaimed concrete pavement may be used as an aggregate component of all asphalt pavements. When crushed reclaimed concrete pavement is used as an aggregate component, controls shall be implemented to prevent segregation. Crushed reclaimed concrete pavement aggregate shall be separated into coarse and fine aggregate stockpiles using the 3/8-inch or 1/2-inch sieve as a break-point unless otherwise approved by the Engineer in writing.

907-401.02.3.1.1--Mixture Properties.

<u>ALL MIXTURES</u>	<u>Percent of Maximum Specific Gravity (Gmm)</u>
N _{Design}	96.0
N _{Initial}	Less than 90.0
N _{Maximum}	Less than 98.0
<u>VMA CRITERIA</u>	<u>Minimum percent</u>
25-mm mixture	12.0
19-mm mixture	13.0
12.5-mm mixture	14.0
9.5-mm mixture	15.0
4.75-mm mixture	16.0

Mixtures with VMA more than two percent higher than the minimum may be susceptible to

flushing and rutting; therefore, unless satisfactory experience with high VMA mixtures is available, mixtures with VMA greater than two percent above the minimum should be avoided.

The specified VFA range for 4.75-mm nominal maximum size mixtures for design traffic levels >3 million ESAL's (HT Mixtures) shall be 75 to 78 percent, for design traffic levels of 1.0 to 3 million ESAL's (MT mixtures) 65 to 78 percent, and for design traffic levels of <1.0 million ESAL's (ST mixtures) 65 to 78 percent.

DUST/BINDER RATIO for 4.75-mm mixtures

Percent Passing No.200 / Effective Binder Percent 0.9 to 2.0

DUST/BINDER RATIO for 9.5-mm, 12.5-mm, 19-mm & 25-mm mixtures

Percent Passing No.200 / Effective Binder Percent 0.8 to 1.6

907-401.02.3.2--Job Mix Formula. The job mix formula shall be established in accordance with Mississippi Test Method: MT-78, where N represents the number of revolutions of the gyratory compactor.

Compaction Requirements:	N _{Initial}	N _{Design}	N _{Maximum}
High Type (HT) Mixtures			
19-mm, 12.5-mm, 9.5-mm & 4.75-mm	7	85	130
Medium Type (MT) Mixtures			
19-mm, 12.5-mm, 9.5-mm & 4.75-mm	7	65	100
All Standard Type (ST) Mixtures;			
25-mm HT & MT Mixtures	6	50	75

At least 10 working days prior to the proposed use of each mixture, the Contractor shall submit in writing to the Engineer a proposed job-mix formula or request the transfer of a verified job-mix formula as set forth in the latest edition of MDOT's Field Manual for HMA and SOP TMD-11-78-00-000. The proposed job-mix formula shall indicate whether the mixture will be produced as HMA or WMA. The process or product used to produce WMA should also be noted on the proposed documentation for the job-mix formula. The job-mix formula shall be signed by a Certified Mixture Design Technician (CMDT).

The Department will perform the tests necessary for review of a proposed job-mix formula for each required mixture free of charge one time only. A charge will be made for additional job-mix formulas submitted by the Contractor for review.

Review of the proposed job-mix formula will be based on percent maximum specific gravity at N_{Initial}, N_{Design}, and N_{Maximum}, VMA @ N_{Design}, resistance to stripping, and other criteria specified for the mixture.

The mixture shall conform thereto within the range of tolerances specified for the particular

mixture. No change in properties or proportion of any component of the job-mix formula shall be made without permission of the Engineer. The job-mix formula for each mixture shall be in effect until revised in writing by the Engineer.

A job-mix formula may be transferred to other contracts in accordance with conditions set forth in the Department's Field Manual for HMA.

The Contractor shall not place any asphalt prior to receiving "tentative" approval and a MDOT design number from the Central Laboratory.

When a change in source of materials, unsatisfactory mixture production results (such as segregation, bleeding, shoving, rutting over $\frac{1}{8}$ ", raveling & cracking) or changed conditions make it necessary, a new job-mix formula will be required. The conditions set out herein for the original job-mix formula are applicable to the new job-mix formula.

In the event the Contractor wishes to change from an approved HMA job-mix formula to WMA or an approved WMA job-mix formula to HMA, the Contractor shall submit the proposed change in writing to the Engineer at least 10 working days prior to the proposed change. If no changes (other than the plant production temperature) are to be made to the job-mix formula, a new MDOT design number will be assigned by the MDOT Central Laboratory.

907-401.02.4--Substitution of Mixture. The substitution of a one (1) size finer mixture for an underlying lift shall require written permission of the State Construction Engineer, except no substitution of a 4.75-mm mixture will be allowed. A 9.5-mm mixture may be substituted for the 12.5-mm mixture designated on the plans as the top lift or pre-leveling. The 19-mm mixture may be substituted for the 25-mm mixture in trench widening work. Any substitution of mixtures shall be of the same type. No other substitutions will be allowed. The quantity of substituted mixture shall be measured and paid for at the contract unit price for the mixture designated on the plans. The substitution of any mixture will be contingent on meeting the required total structure thickness and maintaining the minimum and/or maximum laying thickness for the particular substituted mixture as set out in the following table.

Mixture	Single Lift Laying Thickness Inches	
	Minimum	Maximum
25-mm	3	4
19-mm	2 $\frac{1}{4}$	3 $\frac{1}{2}$
12.5-mm	1 $\frac{1}{2}$	2 $\frac{1}{2}$
9.5-mm	1	1 $\frac{1}{2}$
4.75-mm	$\frac{1}{2}$	$\frac{3}{4}$

907-401.02.5--Contractor's Quality Management Program.

907-401.02.5.1--General. The Contractor shall have full responsibility for quality management

and maintain a quality control system that will furnish reasonable assurance that the mixtures and all component materials incorporated in the work conform to contract requirements. The Contractor shall have responsibility for the initial determination and all subsequent adjustments in proportioning materials used to produce the specified mixture. Adjustments to plant operation and spreading and compaction procedures shall be made immediately when results indicate that they are necessary. Mixture produced by the Contractor without the required testing or personnel on the project shall be subject to removal and replacement by the Contractor at no additional cost to the State.

907-401.02.5.2--Personnel Requirements. The Contractor shall provide at least one Certified Asphalt Technician-I (CAT-I) full-time during asphalt production at each plant site used to furnish material to the project. Sampling shall be conducted by a certified technician or by plant personnel under the direct observation of a certified technician. All testing, data analysis and data posting will be performed by the CAT-I or by an assistant under the direct supervision of the CAT-I. The Contractor shall have a Certified Asphalt Technician-II (CAT-II) available to make any necessary process adjustments. Technician certification shall be in accordance with MDOT SOP TMD-22-10-00-000, MDOT HMA Technician Certification Program. An organizational chart, including names, telephone numbers and current certification, of all those responsible for the quality control program shall be posted in the Contractor's laboratory while the asphaltic paving work is in progress.

907-401.02.5.3--Testing Requirements. As a minimum, the Contractor's quality management program shall include the following:

- (a) Bituminous Material. Provide Engineer with samples in a sealed one quart metal container at the frequency given in MDOT SOP TMD-20-04-00-000.
- (b) Mechanically Fractured Face. Determine mechanically fractured face content of aggregates retained on the No. 4 sieve, at a minimum of one test per day of production.
- (c) Mixture Gradation. Conduct extraction tests for gradation determination on the mixture. Sample according to the frequency in paragraph (i) and test according to Mississippi Test Method MT-31.
- (d) Total Voids and VMA. Determine total voids and voids in mineral aggregate (VMA), at N_{Design} , from the results of bulk specific gravity tests on laboratory compacted specimens. Sample according to the sampling frequency in paragraph (i) and test according to the latest edition of MDOT's Field Manual for HMA.
- (e) Asphalt Content. Sample according to the sampling frequency in paragraph (i). Determine the asphalt content using one of the following procedures.
 - (1) Nuclear gauge per Mississippi Test Method MT-6.
 - (2) Incinerator oven per AASHTO Designation: T 308, Method A.
- (f) Stripping Tests. Conduct a minimum of one stripping test at the beginning of each job-

mix production and thereafter, at least once per each two weeks of production according to Mississippi Test Method: MT-63 and one stripping test per day of production according to Mississippi Test Method: MT-59. Should either the TSR (MT-63) or the boiling water (MT-59) stripping tests fail, a new antistrip additive or rate shall be established or other changes made immediately that will result in a mixture which conforms to the specifications; otherwise, production shall be suspended until corrections are made.

- (g) Density Tests. For 25-mm, 19.5-mm, 12.5-mm & 9.5-mm mixtures, conduct density tests as necessary to control and maintain required compaction according to Mississippi Test Method: MT-16, Method C (nuclear gauge), or AASHTO Designation: T 166. Note - The nuclear gauge may be correlated, at the Contractor's option, with the average of a minimum of five pavement sample densities. For 4.75-mm mixtures, conduct density tests as necessary to control and maintain required compaction according to AASHTO Designation: T 166.
- (h) Quality Control Charts. Plot the individual test data, the average of the last four tests and the control limits for the following items as a minimum:

Mixture Gradation (Percent Passing) Sieves:
 1/2-inch, 3/8-inch, No. 8, No. 16, No. 30 and No. 200.
 Asphalt Content, Percent
 Maximum Specific Gravity, G_{mm}
 Total Voids @ N_{Design} , Percent
 VMA @ N_{Design} , Percent

NOTE: For 4.75-mm mixtures, Quality Control Charts for mixture gradation are not required on the No. 8 and No. 30 sieves. For 4.75-mm mixtures, as a minimum, Quality Control Charts for mixture gradation shall be kept on the 3/8-inch, No. 16 and No. 200 sieves. For all mixtures other than 4.75-mm, Quality Control Charts for mixture gradation are not required on the No. 16 sieve.

Keep charts up-to-date and posted in a readily observable location. Charts may be kept on a computer, however, the charts shall be printed out a minimum of once each production day and displayed in the laboratory. Note any process changes or adjustments on the Air Voids chart.

- (i) Sampling Frequency. Conduct those tests as required above at the following frequency for each mixture produced based on the estimated plant tonnage at the beginning of the day.

<u>Total Estimated Production, tons</u>	<u>Number of Tests</u>
50-800	1
801-1700	2
1701-2700	3
2701+	4

NOTE: Material placed in a storage silo from a previous day's production shall be randomly sampled and tested when removed for placement on the roadway. Such sample(s) shall be independent of the day's production sampling frequency and shall be used in calculating the four (4) sample running average.

- (j) Sample Requirements. Obtain the asphalt mixture samples from trucks at the plant. Obtain aggregate samples from cold feed bins or aggregate stockpile. Save a split portion of all mixture samples at the laboratory site in a dry and protected location for 14 calendar days. At the completion of the project, the remaining samples may be disposed of with the approval of the Engineer.

The above testing frequencies are for the estimated plant production for the day. If production is discontinued or interrupted, the tests will be conducted at the previously established sample tonnage points for the materials that are actually produced. If the production exceeds the estimated tonnage, sampling and testing will continue at the testing increments previously established for the day. A testing increment is defined as the estimated daily tonnage divided by the required number of tests from the table in Subsection 907-401.02.5.3 paragraph (i).

In addition to the above program, the following tests shall be conducted on the first day of production and once for every eight production samples thereafter, with a minimum of one test per production week.

Aggregate Stockpile Gradations per AASHTO Designations: T-11 and T-27.

Reclaimed Asphalt Pavement (RAP) Gradation per Mississippi Test Method MT-31.

Fine Aggregate Angularity for all 4.75-mm and 9.5-mm mixtures and all MT and HT mixtures designed above the maximum density line per ASTM Designation: C 1252, Method A.

Testing of the aggregate and RAP stockpiles during production will be waived provided the Contractor provides the Engineer with gradation test results for the materials in the stockpile determined during the building of the stockpiles. The test results provided shall represent a minimum frequency of one per one thousand tons of material in the stockpile. If the Contractor continues to add materials to the stockpile during asphalt production, the requirements for gradation testing during production are not waived.

907-401.02.5.4--Documentation. The Contractor shall document all observations, records of inspection, adjustments to the mixture, and test results on a daily basis. All tests conducted by the Contractor in accordance with Subsection 907-401.02.5.3(h) shall be included in the running average calculations. If single tests are performed as a check on individual asphalt properties, between regular samples, without performing all tests required in Subsection 907-401.02.5.3(h), the results of those individual tests shall not be included in the running average calculations for that particular property. The Contractor shall record the results of observations and records of inspection as they occur in a permanent field record. The Contractor shall record all process

adjustments and job mix formula (JMF) changes on the air void charts. The Contractor shall provide copies of all test data sheets and the daily summary reports on the appropriate Mississippi DOT forms to the Engineer on a daily basis. The Contractor shall provide a written description of any process change, including blend proportions, to the Engineer as they occur. Information provided to the Engineer must be received in the Engineer's office by no later than 9:00 AM the day after the asphalt is produced. Fourteen days after the completion of the placement of the asphalt, the Contractor shall provide the Engineer with the original testing records and control charts in a neat and orderly manner.

907-401.02.5.5--Control Limits. The following control limits for the job mix formula (JMF) and warning limits are based on a running average of the last four data points.

<u>Item</u>	<u>JMF Limits</u>	<u>Warning Limits</u>
Sieve - % Passing		
1/2-inch	± 5.5	± 4.0
3/8-inch	± 5.5	± 4.0
No. 8	± 5.0	± 4.0
No. 16, for 4.75-mm mixtures ONLY	± 4.0	± 3.0
No. 30	± 4.0	± 3.0
No. 200	± 1.5	± 1.0
Asphalt Content, %	-0.3 to +0.5	-0.2 to + 0.4
Total Voids @ N _{Design} , %	± 1.3	± 1.0
VMA @ N _{Design} , %	- 1.5	- 1.0

907-401.02.5.6--Warning Bands. Warning bands are defined as the area between the JMF limits and the warning limits.

907-401.02.5.7--Job Mix Formula Adjustments. A request for a JMF adjustment signed by a CAT-II may be made to the Engineer by the Contractor. Submit sufficient testing data with the request to justify the change. The requested change will be reviewed by the State Materials Engineer for the Department. If current production values meet the mixture design requirements, a revised JMF will be issued. Adjustments to the JMF shall conform to the latest edition of MDOT's Field Manual for HMA. Adjustments to the JMF to conform to actual production shall not exceed the tolerances specified for the JMF limits. Regardless of such tolerances, any adjusted JMF gradation shall be within the design master range for the mixture specified. The JMF asphalt content may only be reduced if the production VMA meets or exceeds the minimum design VMA requirements for the mixture being produced.

907-401.02.5.8--Actions and Adjustments. Based on the process control test results for any property in question, the following actions shall be taken or adjustments made when appropriate:

- (a) When the running average trends toward the warning limits, the Contractor shall consider taking corrective action. The corrective action, if any, shall be documented. All tests shall be part of the contract files and shall be included in the running average

calculations.

- (b) The Contractor shall notify the Engineer whenever the running average exceeds the warning limits.
- (c) If two consecutive running averages exceed the warning limit, the Contractor shall stop production and make adjustments. Production shall only be restarted after notifying the Engineer of the adjustments made.
- (d) If the adjustment made under (c) improves the process such that the running average after four additional tests is within the warning limits, the Contractor may continue production with no reduction in payment.
- (e) If the adjustment made under (c) does not improve the process and the running average after four additional tests stays in the warning band, the mixture will be considered unsatisfactory. Reduced payment for unsatisfactory mixtures will be applied starting from the stop point to the point when the running average is back within the warning limits in accordance with Subsection 907-401.02.6.3.
- (f) Failure to stop production and make adjustments when required shall subject all mixture produced from the stop point to the point when the running average is back within the warning limits to be considered unsatisfactory. Reduced payment for unsatisfactory mixtures will be applied in accordance with Subsection 907-401.02.6.3.
- (g) If the running average exceeds the JMF limits, the Contractor shall stop production and make adjustments. Production shall only be restarted after notifying the Engineer of the adjustments made.
- (h) All materials for which the running average exceeds the JMF limits will be considered unacceptable and shall be removed and replaced by the Contractor at no additional cost to the State. The Engineer will determine the quantity of material to be replaced based on a review of the individual testing data which make up the running average in question and an inspection of the completed pavement. If the Engineer decides to leave the mixture in place because of special circumstances, the quantity of mixture, as defined above, will be paid for in accordance with Subsection 907-401.02.6.3.
- (i) Single test results shall be compared to 1.7 times the warning and JMF limits. If the test results verified by QA testing (within allowable differences in Subsection 907-401.02.6.2) exceed these limits, the pay factor provided in Subsection 907-401.02.6.3 will apply for the quantity of material represented by the test(s). Single test limits will be used for the acceptance of projects when insufficient tonnage is produced to require four (4) Contractor's tests.
- (j) The above corrective action will also apply for a mixture when the Contractor's testing data has been proven incorrect. The Contractor's data will be considered incorrect when;
1) the Contractor's tests and the Engineer's tests do not agree within the allowable differences given in Subsection 907-401.02.6.2 and the difference can not be resolved, or
2) the Engineer's tests indicates that production is outside the JMF limits and the results have been verified by the Materials Division. The Engineer's data will be used in place of the Contractor's data to determine the appropriate pay factor.

907-401.02.6--Standards of Acceptance.

907-401.02.6.1--General. Acceptance for mixture quality (VMA and total voids @ N_{Design} , gradation, and asphalt content) will be based on random samples tested in accordance with the

latest edition of MDOT's Field Manual for HMA. Pavement densities and smoothness will be accepted by lots as set out in Subsections 907-401.02.6.4 and 907-401.02.6.5.

907-401.02.6.2--Assurance Program for Mixture Quality. The Engineer will conduct a quality assurance program. The quality assurance program will be accomplished as follows:

- 1) Conducting verification tests.
- 2) Validate Contractor test results.
- 3) Periodically observing Contractor quality control sampling and testing.
- 4) Monitoring required quality control charts and test results.
- 5) Sampling and testing materials at any time and at any point in the production or laydown process.

The rounding of all test results will be in accordance with Subsection 700.04.

The Engineer will conduct verification tests on samples taken by the Contractor under the direct supervision of the Engineer at a time specified by the Engineer. The frequency will be equal to or greater than ten percent (10%) of the tests required for Contractor quality control and the data will be provided to the Contractor within two asphalt mixture production days after the sample has been obtained by the Engineer. At least one sample shall be tested from the first two days of production. All testing and data analysis shall be performed by a Certified Asphalt Technician-I (CAT-I) or by an assistant under the direct supervision of the CAT-I. Certification shall be in accordance with the *MDOT HMA Technician Certification Program* chapter in the Materials Division Inspection, Testing, and Certification Manual. The Department shall post a chart giving the names and telephone numbers for the personnel responsible for the assurance program.

The Engineer shall be allowed to inspect Contractor testing equipment and equipment calibration records to confirm both calibration and condition. The Contractor shall calibrate and correlate all testing equipment in accordance with the latest versions of the Department's Test Methods and AASHTO Designation: R 18.

Random differences between the Engineer's verification tests and the current running average of four quality control tests at the time of obtaining the verification sample will be considered acceptable if within the following limits:

Item	Allowable Differences
Sieve - % Passing	
3/8-inch and above	6.0
No. 4	5.0
No. 8	4.0
No. 16, for 4.75-mm mixtures ONLY	3.5
No. 30	3.5
No. 200	2.0
AC Content	0.4
Specimen Bulk SG, Gmb @ N_{Design}	0.030
Maximum SG, Gmm	0.020

If four quality control tests have not been tested prior to the time of the first verification test, the verification test results will be compared to the average of the preceding quality control tests. If the verification test is the first material tested on the project or if a significant process adjustment was made just prior to the verification test, the verification test results will be compared to the average of four subsequent quality control test results. For all other cases after a significant process adjustment, the verification test results will be compared to the average of the preceding quality control tests (taken after the adjustment) as in the case of a new project start-up when four quality control tests are not available.

In the event that; 1) the comparison of the Contractor's running average quality control data and Engineer's quality assurance verification test results are outside the allowable differences in the above table, or 2) if a bias exists between the results, such that one of the results is predominately higher or lower than the other, and the Engineer's results fail to meet the JMF control limits, the Engineer will investigate the reason immediately. As soon as the need for an investigation becomes known, the Engineer will increase the quality assurance sampling rate to the same frequency required for Contractor testing. The additional samples obtained by the Engineer may be used as part of the investigation process or for routine quality assurance verification tests. The Engineer's investigation may include testing of the remaining quality control split samples, review and observation of the Contractor's testing procedures and equipment, and a comparison of split sample test results by the Contractor quality control laboratory, Department quality assurance laboratory and the Materials Division laboratory. The procedures outlined in the latest edition of MDOT's Field Manual for HMA may be used as a guide for the investigation. In the event that the Contractor's results are determined to be incorrect, the Engineer's results will be used for the quality control data and the appropriate payment for the mixture will be based on the procedures specified in Subsection 907-401.02.5.8(j).

The Engineer will periodically witness the sampling and testing being performed by the Contractor. The Engineer, both verbally and in writing, will promptly notify the Contractor of any observed deficiencies. When differences exist between the Contractor and the Engineer which cannot be resolved, a decision will be made by the State Materials Engineer, acting as the referee. The Contractor will be promptly notified in writing of the decision. If the deficiencies are not corrected,

the Engineer will stop production until corrective action is taken.

907-401.02.6.3--Acceptance Procedure for Mixture Quality. All obviously defective material or mixture will be subject to rejection by the Engineer. Such defective material or mixture shall not be incorporated into the finished work. If the defective material has already been placed in the work, the material shall be removed and replaced at no additional cost to the State.

The Engineer will base final acceptance of the asphalt mixture production on the results of the Contractor's testing for total voids and VMA @ N_{Design} , gradation, and asphalt content as verified by the Engineer in the manner hereinbefore described and the uniformity and condition of the completed pavement. Areas of pavement that exhibit non-uniformity or failures, materials or construction related, such as but not limited to segregation, bleeding, shoving, rutting over $\frac{1}{8}$ ", raveling, slippage, or cracking will not be accepted. Such areas will be removed and replaced at no additional cost to the State.

Bituminous mixture placed prior to correction for deficiencies in VMA and total voids @ N_{Design} , gradation, or asphalt content, as required in Subsection 907-401.02.5.8 and determined by the Engineer satisfactory to remain in place will be paid for in accordance with the following pay factors times the contract unit price per ton.

Pay Factor for Mixture Quality *

Item	Produced in Warning Bands	Produced Outside JMF Limits, Allowed to Remain in Place
Gradation	0.90	0.75
Asphalt Content	0.85	0.75
Total Voids @ N_{Design}	0.70	0.50
VMA @ N_{Design}	0.90	0.75

* The minimum single payment will apply.

907-401.02.6.4--Acceptance Procedure for Density. Each completed lift will be accepted with respect to compaction on a lot to lot basis from density tests performed by the Department. For normal production days, divide the production into approximately equal lots as shown in the following table. When cores are being used for the compaction evaluation, randomly obtain one core from each lot. When the nuclear density gauge is being used for compaction evaluation, obtain two random readings from each lot and average the results. See Chapter 7 of the latest edition of MDOT's Field Manual for HMA for more details. Additional tests may be required by the Engineer to determine acceptance of work appearing deficient. The Contractor shall furnish and maintain traffic control for all compaction evaluations, including coring, required in satisfying specified density requirements.

Lot Determination

<u>Daily Production - Tons</u>	<u>Number of Lots</u>
0 - 300	1
301 - 600	2
601 - 1000	3
1001 - 1500	4
1501 - 2100	5
2101 - 2800	6
2801+	7

907-401.02.6.4.1--Roadway Density. The density requirement for each completed lift on a lot to lot basis from density tests performed by the Department shall be as follows:

1. For all leveling lifts, when full lane width and with a thickness as specified in the table in Subsection 907-401.02.4, the required lot density shall be 92.0 percent of maximum density.
2. For all single lift overlays, with or without leveling and/or milling, the required lot density shall be 92.0 percent of maximum density.
3. For all multiple lift overlays of two (2) or more lifts excluding leveling lifts, the required lot density of the bottom lift shall be 92.0 percent of maximum density. The required lot density for all subsequent lifts shall be 93.0 percent of maximum density.
4. For all pavements on new construction, the required lot density for all lifts shall be 93.0 percent of maximum density.

When it is determined that the density for a lot is below the required density (93.0 percent or 92.0 percent) but not lower than 91.0 or 90.0 percent of maximum density, respectively, the Contractor will have the right to remove and replace the lot(s) not meeting the specified density requirements in lieu of accepting reduced payment for the lot(s).

When it is determined that the density for a lot is above 96.0 percent, the Engineer shall notify the Contractor who will make plant adjustments to resolve the problem.

When it is determined that the density for a lot is below 91.0 or 90.0 percent, respectively, the lot(s), or portions thereof shall be removed and replaced in accordance with Chapter 7 of the latest edition of MDOT's Field Manual for HMA at no additional cost to the State. A corrected lot will be retested for approval. No resampling will be performed when pavement samples are used for determining density.

At any time the average daily compaction (the total of the percent compaction for the lots produced in one day divided by the total number of lots for the day) does not meet the required percent compaction or more for two consecutive days, the Contractor shall notify the Engineer of proposed changes to the compactive effort. If the average daily compaction does not meet the

required percent compaction or more for a third consecutive day, the Contractor shall stop production until compaction procedures are established to meet the specified density requirements.

Each lot of work found not to meet the density requirement of 92.0% or 93% of maximum density, respectively, may remain in place with a reduction in payment as set out in the following tables:

**PAYMENT SCHEDULE FOR COMPACTION
OF 92.0 PERCENT OF MAXIMUM DENSITY**

<u>Pay Factor</u>	<u>Lot Density ** % of Maximum Density</u>
1.00	92.0 and above
0.90	91.0 - 91.9
0.70	90.0 - 90.9

** Any lot or portion thereof with a density of less than 90.0 percent of maximum density shall be removed and replaced at no additional cost to the State.

**PAYMENT SCHEDULE FOR COMPACTION
OF 93.0 PERCENT OF MAXIMUM DENSITY**

<u>Pay Factor</u>	<u>Lot Density *** % of Maximum Density</u>
1.00	93.0 and above
0.90	92.0 - 92.9
0.70	91.0 - 91.9

*** Any lot or portion thereof with a density of less than 91.0 percent of maximum density shall be removed and replaced at no additional cost to the State.

The compaction pay factors and mixture quality pay factor, as described in Subsection 907-401.02.6.3, will each apply separately. However, the combined pay factor shall not be less than 0.50 for any mixture allowed to remain in place.

907-401.02.6.4.2--Trench Widening Density. The density for trench widening on a lot to lot basis shall be determined from density tests performed by the Department using pavement samples (cores).

When it is determined that the density for a trench widening lot is below 89.0 percent but not lower than 88.0 percent of maximum density, the Contractor will have the right to remove and replace the lot(s) not meeting the specified density requirements in lieu of accepting reduced payment for the lot(s).

When it is determined that the density for a trench widening lot is above 95.0 percent, the Engineer shall notify the Contractor who will make plant adjustments to resolve the problem.

When it is determined that the density for a trench widening lot is below 88.0 percent, the lot(s), or portions thereof shall be removed and replaced in accordance with Chapter 7 of the latest edition of MDOT's Field Manual for HMA at no additional cost to the State. A corrected lot will be retested for approval. No resampling will be performed when pavement samples are used for determining density.

At any time the daily compaction (the total of the percent compaction for the lots produced in one day divided by the total number of lots for the day) does not meet 89.0 percent compaction or more for two consecutive days, the Contractor shall notify the Engineer of proposed changes to the compactive effort. If the average daily compaction does not meet 89.0 percent compaction or more for a third consecutive day, the Contractor shall stop production until compaction procedures are established to meet the specified density requirement.

Each lot of trench widening work found not to meet the density requirement of 91.0 percent of maximum density may remain in place with a reduction in payment as set out in the following table:

**PAYMENT SCHEDULE FOR COMPACTION
TRENCH WIDENING WORK**

<u>Pay Factor</u>	Lot Density *** <u>% of Maximum Density</u>
1.00	89.0 and above
0.50	88.0 - 88.9

*** Any lot or portion thereof with a density of less than 88.0 percent of maximum density shall be removed and replaced at no additional cost to the State.

The compaction pay factors and mixture quality pay factor, as described in Subsection 907-401.02.6.3, will each apply separately. However, the combined pay factor shall not be less than 0.50 for any mixture allowed to remain in place.

907-401.02.6.5--Blank.

907-401.02.6.6--Blank.

907-401.02.6.7--Surface Correction. Corrective work to sections exceeding short continuous interval thresholds reported by ProVal, as described in Subsection 907-403.03.2.1, shall consist of diamond grinding in accordance with these specifications or methods approved by the Engineer. All surface areas corrected by grinding shall be sealed with a sealant approved by the Engineer.

907-401.02.6.7.1--Diamond Grinding. Grinding of asphalt surfaces shall consist of diamond

grinding the existing asphalt pavement surface to remove surface distortions to achieve the specified surface smoothness requirements.

907-401.02.6.7.2--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture pavement surfaces with diamond blades. The effective wheel base of the machine shall not be less than 12.0 feet. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 3.0 feet forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least two feet (2') wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at joints, or other locations.

907-401.02.6.7.3--Construction. The construction operation shall be scheduled and proceed in a manner that produces a uniform finish surface. Grinding will be accomplished in a manner to provide positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane.

The operation shall result in pavement that conforms to the typical cross-section and the requirements specified in Subsection 907-401.02.6.7.4. It is the intent of this specification that the surface smoothness characteristics be within the limits specified.

The Contractor shall establish positive means for removal of grinding residue. Solid residue shall be removed from pavement surfaces before it is blown by traffic action or wind. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities, but may be allowed to flow into adjacent ditches.

907-401.02.6.7.4--Finished Pavement Surface. The grinding process shall produce a pavement surface that is smooth and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall not be more than 1/16 inch higher than the bottoms of the grooves.

The finished pavement surface will be measured for riding quality. The grinding shall produce a riding surface which does not exceed either the specified profile index or the specified bump and dip limit.

907-401.02.6.8--Acceptance Procedure for Pavement Smoothness Using Mean Roughness Index (MRI). When compaction is completed, the lift shall have a uniform surface and be in reasonably close conformity with the line, grade and cross section shown on the plans.

The smoothness of the surface lift will be determined by using an Inertial Profiling System (IPS) to measure and record roughness data in each designated location. Roughness data for each longitudinal profile will be reported as a Mean Roughness Index (MRI). MRI is calculated by

averaging the International Roughness Index (IRI) values from the two individual wheelpath profiles. The surface shall be tested and corrected to a smoothness index as described herein with the exception of those locations or specific projects that are excluded from smoothness testing with an IPS.

The smoothness of the surface lift will be determined for traffic lanes, auxiliary lanes, climbing lane and two-way turn lanes. Areas excluded from a smoothness test with the IPS are acceleration and deceleration lanes, tapered sections, transition sections for width, shoulders, crossovers, ramps, side street returns, etc. The roadway pavement on bridge replacement projects having 1,000 feet or less of pavement on each side of the structure will be excluded from a smoothness test. Pavement on horizontal curves having a radius of less than 1,000 feet at the centerline and pavement within the super elevation transition of such curves are excluded from smoothness testing. Smoothness testing shall terminate 264 feet from each transverse joint that separates the pavement from a bridge deck, bridge approach slab or existing pavement not constructed under the contract. This shall apply to any other exceptions including, but not limited to, railroad crossings and manholes. Segments containing a considerable amount of encroachments such as intersections, manholes, curb and gutter sections, etc. may be excluded at the Project Engineer's discretion.

Initial smoothness measurements shall take place no more than 72 hours following placement of surface and must be performed at the posted speed limit or 50 miles per hour (± 5 mile per hour), whichever is lower. This speed requirement will be waived for all lightweight profilers. Measurements will be made in both wheel paths of exterior and interior lanes. The wheel paths shall be designated as being located three feet (3') and nine feet (9') from centerline or longitudinal joint, respectively. Beginning and ending latitude and longitude coordinates shall be required on each smoothness surface test. Testing will also be required on sections that have been surface corrected. No smoothness testing shall be performed when there is moisture of any kind on the pavement surface. Any additional testing shall meet the requirements of Subsection 907-403.03.2.

The surface lift will be accepted on a continuous interval basis for pavement smoothness. Continuous reporting is based upon all MRI values for a specified running interval. These values are averaged and presented at the midpoint of the specified running interval. The last 15 feet of a day's lift may not be obtainable until the lift is continued and for this reason may be included in the subsequent section.

Areas of localized roughness exceeding the continuous 25-foot interval threshold described in Subsection 907-403.03.2.1 shall be corrected regardless of the 528-foot interval MRI value of the section. Surface correction by grinding shall be performed in accordance with Subsection 907-401.02.6.7. The Contractor shall also make other necessary surface corrections to ensure that the final mean roughness index of the section meets the requirements of Subsection 907-403.03.2.

Continuous sections exceeding the accepted long interval MRI value shall be corrected as specified in Subsection 403.03.4. All such corrections shall be performed at no additional costs to the State. Scheduling and traffic control will be the responsibility of the Contractor with

approval of the Engineer. All tests and corrections shall be in accordance with AASHTO R 54-10, Accepting Pavement Ride Quality When Measured Using Inertial Profiling Systems.

907-401.02.6.9--High Speed Inertial Profiling System.

907-401.02.6.9.1--General. The IPS, furnished and operated by the Contractor under the supervision of the Engineer or the Engineer's representative, shall be a dual laser high speed or lightweight vehicle meeting the requirements of AASHTO M 328-10, Standard Specification for Inertial Profiler.

907-401.02.6.9.2--Mechanical Requirements. The IPS should function independent of vehicle suspension and speed with an operational range of 15-70 mph (for high speed profilers only) and must collect data at a sample interval of no more than three inches (3"). All IPSs, operators, and combinations thereof shall be verified in accordance with AASHTO R 56-10, Standard Practice for Certification of Inertial Profiler Systems and AASHTO R 57-10, Operating Inertial Profiler Systems.

907-401.02.6.9.3--Computer Requirements. The computer measurement program must be menu driven, Windows compatible, and able to produce unfiltered profiler runs in any one of the following file formats: University of Michigan's Transportation Research Institute's (UMTRI) Engineering Research Division (*.erd) file, ProVAL's Pavement Profile (*.ppf) file, or Ames Engineering's (*.adf) file format. The computer shall have the ability to display and print data on site for verification and shall have the ability to save and transfer data via Universal Serial Bus (USB) flash drive, which shall be provided by the Contractor.

All profiler runs must be named in the following format for acceptance by the Project Engineer:

- County_Route_Direction_Lane_BeginStation_EndStation

In addition to manufacturers software; the latest version of FHWA's ProVAL software shall be installed on the IPS computer. ProVAL software is available for free download at <http://www.roadprofile.com>.

907-401.02.7--Nuclear Gauges.

907-401.02.7.1--Nuclear Moisture-Density Gauge. The nuclear gauge unit used to monitor density shall contain a full data processor which holds all calibration constants necessary to compute and directly display wet density, moisture, and dry density in pounds per cubic foot. The data processor shall compute and display the percent moisture and percent density based on dry weight.

907-401.02.7.2--Nuclear Asphalt Content Gauge. The Contractor shall furnish and calibrate, unless designated otherwise in the contract, a Troxler Nuclear Asphalt Content Gauge Model 3241 or updated model, or a Campbell Nuclear Asphalt Content Gauge Model AC-2 or an approved equal.

907-401.03--Construction Requirements. Mississippi DOT has adopted the "Hot-Mix Asphalt

Paving Handbook” as the guideline for acceptable asphalt construction practices.

907-401.03.1--Specific Requirements.

907-401.03.1.1--Weather Limitations - General. The mixture shall not be placed when weather conditions prevent the proper handling and finishing or the surface on which it is to be placed is wet or frozen.

When paving operations are discontinued because of rain, the mixture in transit shall be protected until the rain ceases. The surface on which the mixture is to be placed shall be swept to remove as much moisture as possible and the mixture may then be placed subject to removal and replacement at no additional cost to the State if contract requirements are not met.

907-401.03.1.1.1--Weather Limitations For HMA. At the time of placement, the air and pavement surface temperature limitations shall be equal to or exceed that specified in the following table.

TEMPERATURE LIMITATIONS

Compacted Thickness	Temperature
Less than 1½ inches	55°F
1½ inches to 2 inches	50°F
2¼ inches to 3 inches	45°F
Greater than 3 inches	40°F

907-401.03.1.1.2--Weather Limitations For WMA. The air and pavement temperature at the time of placement shall equal or exceed 40°F, regardless of compacted lift thickness.

907-401.03.1.2--Tack Coat. Tack coat shall be applied to previously placed asphalt and between lifts, unless otherwise directed by the Engineer. Tack coat shall be applied with a distributor spray bar. A hand wand will only be allowed for applying tack coat on ramp pads, irregular shoulder areas, median crossovers, turnouts, or other irregular areas. Bituminous materials and application rates for tack coat shall be as specified in Table 410-A on page 293. Construction requirements shall be in accordance with Subsection 407.03 of the Standard Specifications.

907-401.03.1.3--Blank.

907-401.03.1.4--Density. The lot density for all dense graded pavement lifts, except as provided below for preleveling, wedging [less than fifty percent (50%) of width greater than minimum lift thickness], ramp pads, irregular shoulder areas, median crossovers, turnouts, or other areas where the established rolling pattern cannot be performed, shall not be less than the specified percent (92.0% or 93.0%) of the maximum density based on AASHTO Designation: T 209 for the day’s production. For all leveling lifts, when full lane width and with a thickness as specified in the table in Subsection 907-401.02.4, the required lot density shall be 92.0 percent of maximum

density. If a job-mix formula adjustment is made during the day which affects the maximum specific gravity, calculate a new average maximum density for the lot(s) placed after the change.

Pavement core samples obtained for determining density which has a thickness less than two times the maximum size aggregate permitted by the job-mix formula will not be used as a representative sample.

Preleveling, wedging (less than fifty percent of width greater than minimum lift thickness), ramp pads, irregular shoulder areas, median crossovers, turnouts, and other areas where an established rolling pattern cannot be obtained shall be compacted to refusal densification.

907-401.03.2--Bituminous Mixing Plants.

907-401.03.2.1--Plant Requirements.

907-401.03.2.1.1--Cold Aggregate Storage. The cold storage for hydrated lime shall be a separate bulk storage bin with a vane feeder or other approved feeder system which can readily be calibrated. The system shall provide a means for easy sampling of the hydrated lime additive and verifying the quantity of lime dispensed. The feeder system shall require a totalizer.

The hydrated lime additive equipment shall be interlocked and synchronized with the cold feed controls to operate concurrently with the cold feed operation which will automatically adjust the hydrated lime feed to variations in the cold aggregate feed. A positive signal system shall be installed which will automatically shut the plant down when malfunctions cause an improper supply of hydrated lime or water.

The plant shall not operate unless the entire hydrated lime system is functioning properly.

907-401.03.2.1.2--Cold Aggregate Feed. The hydrated lime shall be dispensed dry or as a slurry directly onto the composite aggregate between the cold feed and the dryer. The slurry shall consist of 1 part hydrated lime to 3 parts water.

When hydrated lime is introduced dry, a spray bar or other approved system capable of spraying all aggregate with water shall be installed in order to maintain all aggregate at the moisture condition set out in Subsection 907-401.02.3.1 prior to addition of the hydrated lime. An alternate system for spraying the coarse aggregate stockpiles may be allowed when approved by the Engineer. The approved equipment and methods shall consistently maintain the aggregate in a uniform, surface wet condition. The moisture content of the aggregate-hydrated lime mixture, following spraying and mixing, shall be introduced into the automatic moisture controls of the plant.

The aggregate-hydrated lime mixture shall be uniformly blended by some mechanical means such as a motorized "on the belt" mixer or pug mill located between the cold feed and the dryer. Other mixing devices may be used subject to approval by the Engineer.

A maximum of forty five (45) percent of the total aggregate blend may be fed through any single

cold feed bin. If the JMF calls for more than forty five (45) percent of a specific aggregate, that aggregate must be fed through two (2) or more separate cold feed bins.

907-401.03.2.1.3--Dryer. The efficiency of drying aggregates shall be such that the moisture content of the top asphalt mixture shall not exceed 0.50 percent by weight of the total mixture, and the moisture content of all the underlying mixtures shall not exceed 0.75 percent by weight of the total mixture being produced.

907-401.03.2.1.4--Blank.

907-401.03.2.1.5--Control of Bituminous Material and Antistripping Agent. Specified bituminous materials from different manufacturers or from different refineries of a single manufacturer shall not be mixed in the plant's asphalt cement supply system storage tank and used in the work without prior written approval of the Engineer. Approval is contingent upon the Engineer's receipt of three copies of the manufacturer's certified test report(s) from the Contractor showing that the bituminous material blend conforms to the specifications.

A satisfactory method of weighing or metering shall be provided to ensure the specified quantity of bituminous material. Provisions shall be provided for checking the quantity or rate of flow. Weighing or metering devices shall be accurate within plus or minus one-half percent.

The antistripping agent shall be injected into the bituminous material immediately prior to the mixing operation with an approved in-line injector system capable of being calibrated so as to ensure the prescribed dosage.

An in-line spigot for sampling of asphalt shall be located between the asphalt storage tank and the antistripping agent in-line injector.

907-401.03.2.1.6--Thermometric Equipment. An armored thermometer of adequate range and calibrated in 5°F increments shall be fixed at a suitable location in the bituminous line near the charging valve of the mixer unit.

The plant shall be equipped with an approved dial-scale, mercury-actuated thermometer, pyrometer or other approved thermometric instrument placed at the discharge chute of the dryer to measure the temperature of the material.

When the temperature control is unsatisfactory, the Engineer may require an approved temperature-recording apparatus for better regulation of the temperature.

907-401.03.2.1.7--Screens. A scalping screen shall be used.

907-401.03.2.1.8--Dust Collector. The plant shall be equipped with a dust collector constructed to waste or return collected material. When collected material is returned, it shall be returned through a controlling device which will provide a uniform flow of material into the aggregate mixture.

907-401.03.2.1.9--Safety Requirements. A platform or other suitable device shall be provided so the Engineer will have access to the truck bodies for sampling and mixture temperature data.

907-401.03.2.1.10--Blank.

907-401.03.2.1.11--Truck Scales. The specifications, tolerances and regulations for commercial weighing and measuring devices as recommended by the National Bureau of Standards [National Institute of Standards and Technology (NIST) Handbook 44] shall govern truck scales used in the State of Mississippi, except weighing devices with a capacity of ten thousand (10,000) pounds or more used to weigh road construction materials (i.e. sand, gravel, asphalt, fill dirt, topsoil and concrete) shall have a tolerance of one-half of one percent (1/2 of 1%) in lieu of the requirements of Handbook 44 and shall be regulated by the Mississippi Department of Transportation.

Scales shall be checked and certified by a scale company certified in heavy truck weights by the Mississippi Department of Agriculture and Commerce. In the case of scales used for measurement of materials on Department of Transportation projects, certification shall be performed in the presence of an authorized representative of the Department or a copy of the certification may be furnished for scales that have been checked and certified within the last six months for use on other Department of Transportation projects and are still in the position where previously tested. Scales that have not been checked and certified under NIST Handbook 44 guidelines, except for the herein modified tolerances allowed, shall be so checked and certified prior to use for measurement of materials on Department of Transportation projects. Tests shall be continued on six month intervals with the test conducted in the presence of an authorized representative of the Department.

Truck scales shall be accurate to one-half of one percent of the applied load, shall be sensitive to 20 pounds, and shall have a graduation of not more than 20 pounds.

The Contractor may use an electronic weighing system approved by the Engineer in lieu of truck scales. The system shall be equipped with an automatic print out system which will print a ticket for each load with the following information:

MDOT, Contractor's name, project number, county, ticket number, load number, pay item number, item description of the material delivered, date, time of day, haul vehicle number, gross weight, tare weight, net weight and total daily net weight.

When approved by the Engineer and materials are measured directly from a storage bin equipped with load cells, exceptions may be made to the gross and tare weight requirements.

The ticket shall also have a place for recording the temperature of asphalt mixtures, if applicable, and the signatures of MDOT's plant and roadway inspectors. The load numbers for each project shall begin with load number one (1) for the first load of the day and shall be numbered consecutively without a break until the last load of the day. The Contractor shall provide MDOT with an original and one copy of each ticket. When the ticket information provided by the Contractor proves to be unsatisfactory, MDOT will use imprinter(s) and imprinter tickets to

record load information. All recorded weights shall be in pounds and shall be accurate to within one-half of one percent of the true weight, and the system shall be sensitive to 20 pounds. The Engineer will require random loads to be checked on certified platform scales at no cost to the Department.

When an electronic weighing system utilizes the plant scales of a batch plant, the system may be used only in conjunction with a fully automatic batching and control system.

907-401.03.2.2--Additional Requirements for Batching Plants.

907-401.03.2.2.1--Plant Scales. The plant batch scale weight shall not exceed the platform scale weight by more than one percent (1.0%).

907-401.03.2.3--Additional Requirements for Drum Mixing Plants.

907-401.03.2.3.1--Plant Controls. The plant shall be operated with all the automatic controls as designed and provided by the plant manufacturer. If the automatic controls malfunction, brief periods of manual operations to complete the day's work or to protect the work already placed may be conducted with the approval of the Engineer. During manual operation, the Contractor must continue to produce a uniform mixture meeting all contract requirements.

907-401.03.2.3.2--Aggregate Handling and Proportioning. A screening unit shall be placed between the bins and the mixer to remove oversized aggregate, roots, clayballs, etc.

907-401.03.2.4--Surge or Storage Bins. Surge and/or storage systems may be used at the option of the Contractor provided each system is approved by the Department prior to use. Surge bins shall be emptied at the end of each day's operation. Storage silos may be used to store mixtures as follows:

19-mm & 25-mm mixtures	24 hours
9.5-mm & 12.5-mm mixtures	36 hours

The storage silos must be well sealed, completely heated and very well insulated. The mixture when removed from the storage silo shall be tested to ensure that it meets all the same specifications and requirements as the mixture delivered directly to the paving site. See Subsection 907-401.02.5.3, subparagraph (i) for sampling and testing requirements.

907-401.03.3--Hauling Equipment. The inside surfaces of each vehicle bed shall be coated with a light application of water and thin oil, soap solution, lime water solution or other approved material to prevent the mixture from sticking. Diesel fuel or gasoline shall not be used to lubricate vehicle beds. Truck beds shall be raised to drain excessive lubricants before placing mixture in the bed. An excess of lubricant will not be permitted.

907-401.03.4--Bituminous Pavers. The screed or strikeoff assembly shall be capable of vibrating and heating the full width of the mixture being placed and shall lay the lift with an automatic control device to the specified slope and grade without tearing, pulling or gouging the

mixture surface.

907-401.03.5--Rollers. All rollers shall be self-propelled units capable of maintaining a smooth and uniform forward and reverse speed as required for proper compaction. They shall be equipped with adjustable scrapers, water tanks, mats and a device for wetting the wheels or tires to prevent the mixture from sticking. Adhesion of the mixture to the rollers will not be permitted. The use of diesel fuel or gasoline for cleaning roller wheels or tires or to aid in preventing the mixture from sticking to the wheels or tires is prohibited.

All rollers shall be in good mechanical condition, free from leaking fuels and lubricants, loose link motion, faulty steering mechanism, worn king bolts and bearings. They shall be operational at slow speeds to avoid displacement of the mixture and capable of reversing direction smoothly and without backlash.

907-401.03.6--Preparation of Grade. The foundation upon which asphalt pavement is to be placed shall be prepared in accordance with the applicable Section of the Standard Specification.

Unless otherwise directed, tack coat shall be applied to the underlying surface on which the mixture is to be placed. Emulsions, if used, must be allowed to "break" prior to placement of the bituminous mixture.

Bituminous mixture shall not be placed against the edge of pavements, curbs, gutters, manholes and other structures until sprayed with a thin uniform tack coating. The tack coat shall be protected until the mixture has been placed.

Existing asphalt pavements that require preliminary leveling or patching in advance of placing the bituminous mixture shall be sprayed with a tack coat material and then brought as nearly as practicable to uniform grade and cross section. The material shall be placed by hand or machine in one or more compacted layers approximately two (2) inches or less in compacted thickness.

907-401.03.7--Blank.

907-401.03.8--Preparation of Mixture.

907-401.03.8.1--Preparation of Mixture For HMA. The temperature of the mixture, when discharged from the mixer, shall not exceed 340°F.

907-401.03.8.2--Preparation of Mixture For WMA. Warm mix asphalt is defined as a plant produced asphalt mixture that can be produced and constructed at lower temperatures than typical hot mix asphalt. Typical temperature ranges of non-polymer modified, WMA produced by foaming the asphalt binder at the plant are typically 270°F to 295°F at the point of discharge of the plant. Typical temperature ranges of polymer modified, WMA produced by foaming the asphalt binder at the plant are typically 280°F to 305°F at the point of discharge of the plant. WMA produced by addition of a terminal blended additive may allow the producer to reduce the temperatures below 270°F as long as all mixture quality and field density requirements are met. Production temperatures at the plant may need to be increased or decreased due to factors such as

material characteristics, environmental conditions, and haul time to achieve mixture temperatures at the time of compaction in which uniform mat density can be achieved.

907-401.03.9--Material Transfer Equipment. Excluding the areas mentioned below, the material transferred from the hauling unit when placing the top lift, or the top two (2) lifts of a multi-lift asphalt pavement with density requirements, shall be remixed prior to being placed in the paver hopper or insert by using an approved Materials Transfer Device. Information on approved devices can be obtained from the State Construction Engineer. Areas excluded from this requirement include: leveling courses, temporary work of short duration, detours, bridge replacement projects having less than 1,000 feet of pavement on each side of the structure, acceleration and deceleration lanes less than 1,000 feet in length, tapered sections, transition sections for width, shoulders less than 10 feet in width, crossovers, ramps, side street returns and other areas designated by the Engineer.

907-401.03.10--Spreading and Finishing. Grade control for asphalt pavements shall be established by stringline at least 500 feet ahead of spreading, unless placement is adjacent to curb and gutter, concrete pavement, or other allowed grade control.

The mixture shall be spread to the depth and width that will provide the specified compacted thickness, line, grade and cross section. Placing of the mixture shall be as continuous as possible. On areas where mechanical spreading and finishing is impracticable, the mixture may be spread, raked and luted by hand tools.

Immediately after screeding and prior to compaction, the surface shall be checked by the Contractor and irregularities adjusted. When the edge is feathered as in a wedge lift, it may be sealed by rolling. Irregularities in alignment and grade along the edges shall be corrected before the edges are rolled.

Hauling, spreading and finishing equipment shall be furnished that is capable of and operated in such a manner that the rolling operation will satisfactorily correct any surface blemishes.

The longitudinal joint in the subsequent lift shall offset that in the underlying lift by approximately six (6) inches. However, the joint in the top lift shall be at the centerline or lane line.

907-401.03.11--Compaction. After the mixture has been spread and surface irregularities corrected, it shall be thoroughly and uniformly compacted to the required line, grade, cross section and density.

907-401.03.12--Joints. Joints between previously placed pavement and pavement being placed shall be so formed as to insure thorough and continuous bond.

Transverse construction joints shall be formed by cutting the previously placed mixture to expose the full depth of the lift.

The contact surface of transverse joints and longitudinal joints, except hot joints, shall be sprayed

with a thin uniform tack coating before additional mixture is placed against the previously placed material.

Longitudinal joints shall be formed by overlapping the screed on the previously placed material for a width of at least one (1) inch and depositing the quantity of mixture to form a smooth, tight joint.

Joint Sealant. When a pay item for 907-403-S, Joint Sealant, is included in the contract, the contact surface of transverse joints and longitudinal joints in the surface lift, except hot joints, shall be sealed by spraying a thin, uniform coat of PavonTM, CrafcoTM Pavement Joint Adhesive No. 34524, Dura-Fill Cold Joint Adhesive, or approved equal, prior to placement of additional asphalt against the previously placed material. Manufacturer's recommendations shall be followed if the material needs to be re-heated, and when placing the thin, uniform coat.

Prior to application of the sealant, the face of the joint shall be thoroughly dry and free from dust or any other material that would prevent proper sealing. All joints shall be swept or blown free of loose material, dirt, vegetation, and other debris by means of compressed air or a power sweeper.

Truck and vehicle traffic shall not drive across a sealed joint until it has dried sufficient to prevent damage from tracking.

The Contractor shall furnish the Engineer three copies of the manufacturer's certification stating that the material used meets the requirement of the specifications.

907-401.03.13--Pavement Samples. The Contractor shall cut samples from each lift of asphalt at the time and locations designated by the Engineer. The samples shall be taken for the full depth of each lift and shall be of a size approved by the Engineer but not to exceed 120 square inches. Tools used for cutting or coring of samples shall be of the revolving blade type such as saw or core drill. Cores shall be taken using a 4.0 to 6.0-inch inside diameter coring bit. The sample hole shall be filled, compacted and finished by the Contractor to conform with the surrounding area. No additional compensation will be allowed for furnishing samples and repairing the areas with new pavement.

907-401.03.14--Shoulder Wedge. The Contractor shall attach a device to the screed of the paver that confines the material at the end gate and extrudes the asphalt material in such a way that results in a compacted wedge shape pavement edge of approximately 30 degrees, but not steeper than 35 degrees. The device shall maintain contact between itself and the road shoulder surface and allow for automatic transition to cross roads, driveways, and obstructions. The device shall be used to constrain the asphalt head reducing the area by 10% to 15% increasing the density of the extruded profile. Conventional single plate strike off shall not be used.

The device shall be TransTech Shoulder Wedge Maker, the Advant-Edge, or a similar approved equal device that produces the same wedge consolidation results. Contact information for these wedge shape compaction devices is the following.

1. TransTech Systems, Inc.
1594 State Street
Schenectady, NY 12304
800-724-6306
www.transtechsys.com
2. Advant-Edge Paving Equipment, LLC
P.O. Box 9163
Niskayuna, NY 12309-0163
518-280-6090
Contact; Gary D. Antonelli
Cell: 518-368-5699
email: garya@nycap.rr.com
Website: www.advantedgepaving.com

Before using a similar device, the Contractor shall provide proof that the device has been used on previous projects with acceptable results, or construct a test section prior to the beginning of work and demonstrate wedge compaction to the satisfaction of the Engineer. Short sections of handwork will be allowed when necessary for transitions and turnouts, or otherwise authorized by the Engineer.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-403-14

CODE: (SP)

DATE: 12/02/2014

SUBJECT: Asphalt Pavements

Section 403, Asphalt Pavements, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is deleted and replaced as follows.

SECTION 907-403 - ASPHALT PAVEMENTS

907-403.01--Description. This work consists of constructing one or more lifts of asphalt pavement meeting the requirements of Section 907-401 on a prepared surface in accordance with the requirements of this section and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the plans or established by the Engineer. This work shall also include applicable in-grade preparation of the underlying course in accordance with Section 321.

The Contractor must select one of the asphalt mixture processes (HMA or WMA) to be used on this project.

907-403.02--Material Requirements. Materials and their use shall conform to the applicable requirements of Subsection 907-401.02.

907-403.03--Construction Requirements.

907-403.03.1--General. Construction requirements shall be as specified in Subsection 907-401.03, except as otherwise indicated in this section or applicable special provisions.

907-403.03.2--Smoothness Tolerances. Except as noted herein, the finished smoothness of each lift shall conform to the designated grade and cross section within the following tolerances from grade stakes or other grade reference points set at 25-foot intervals:

	Lower* & Leveling Lifts	Lower* Intermediate Lift	Top Intermediate Lift	Surface Lift
Maximum deviation from grade and cross section at any point	1/2"	3/8"	1/4"	1/4"
Maximum deviation from A 10 foot straight edge.....	3/8"	1/4"	1/8"	1/8"

Note: Where more than four (4) lifts of asphalt are required, all lifts, excluding the top three (3) lifts, shall meet the requirements of the lower lift.

- * When tested longitudinally from a stringline located equidistant above points 50 feet apart, the distance from the stringline to the surface at any two points located 12½ feet apart shall not vary one from the other more than the maximum deviation allowed above from a 10-foot straight edge.

Grade stakes or other grade reference points set at 25-foot intervals and maximum deviation from grade and cross section will not be required provided an approved profile averaging device is furnished and properly used for the four conditions set forth herein; however, all other surface requirements are applicable.

- (a) Overlays with one overall lift.
- (b) Overlays with two or more overall lifts -- for each lift above the first overall lift provided each underlying overall lift is within the allowable tolerances.
- (c) Surface lift of new construction provided the underlying lift is within the allowable tolerances.
- (d) Full-depth asphalt construction for lifts above the lower lift provided the lower lift is within the specified tolerances for the lower intermediate lift.

In the placement of full depth asphalt pavement, where the chemically treated base is constructed, graded and/or trimmed, full lane width, to a surface tolerance of $\pm 3/8$ inches from design grade, stringline grade controls may be eliminated for the placement of the asphalt drainage course and all asphalt lifts. In addition, where the base course is crushed stone or crushed concrete and is constructed to a surface tolerance of $\pm 3/8$ inches from design grade using a stringline controlled spreader, stringline grade controls may be eliminated for the placement of the asphalt drainage course and all asphalt lifts.

All other tolerances as specified in Section 321 are applicable, except for bases, when tested longitudinally, the maximum deviation when measured at the 12½-foot midpoint shall be $\pm 3/8$ inches.

Acceptance and payment of asphalt will be determined on a lot to lot basis by cores taken from the completed pavement as outlined in Subsection 907-403.03.3.

Approved contacting type profile averaging devices are those devices capable of working in conjunction with a taut string or wire set to grade, or ski-type device with extreme contact points with the surface at least 30 feet apart. Approved non-contacting type profile averaging devices are laser type ski devices with at least four referencing mobile stations at a minimum length of 24 feet, or an approved equal.

When approved by the Engineer, a short ski or shoe may be substituted for a long ski on the

second paving operation working in tandem.

During the finishing and compacting of pavement lifts, it shall be the responsibility of the Contractor to check the surface and joints for progress toward conformance to surface requirements set forth herein. Variations from surface requirements exceeding the allowable tolerances shall be corrected at the Contractor's expense.

When a portland cement concrete pavement is to be placed on an asphalt lift, the finished top of the asphalt lift shall meet the requirements of Sections 32l and 50l.

Sections(s) or portions thereof representing areas excluded from a smoothness test with the High Speed Inertial Profiling System (IPS) shall also be excluded from consideration for a contract price adjustment for rideability.

Any contract price adjustment for rideability will be applied on a continuous basis to the pay tonnage, determined in accordance with Subsections 907-401.02.6.8 and 907-403.04, for the section(s) or portions thereof for which an adjustment is warranted.

Contract price adjustments for rideability shall only be applicable to the surface lift and furthermore to only the long continuous section(s) or portions of the long continuous section(s) of the surface lift that require smoothness be determined by using a profiling device.

907-403.03.2.1--Smoothness Tolerances for Mean Roughness Index (MRI). Smoothness tolerances shall be applied to asphalt pavements based on the following pavement categories.

Category A applies to the following pavement constructions:

- New construction
- Construction with three (3) or more lifts
- Mill and two (2) or more lifts

Category B applies to the following pavement constructions:

- Mill and one (1) lift
- Two (2) lift overlays without milling

Category C applies to the following pavement constructions:

- Single lift overlay without milling
- All 57,650-pound routes regardless of the pavement construction

Additional projects may qualify for Category C construction at the department's discretion. Spot Leveling does not count as a lift. Full width / continuous leveling courses that have a minimum thickness of $\frac{3}{4}$ " across the entire lane width will be considered a lift.

Category A projects shall have a long continuous interval (528-foot) surface MRI of not more than 60 inches per mile.

Category B projects shall have a long continuous interval (528-foot) surface MRI of not more than 70 inches per mile.

Category C projects shall have the existing surface profiled at no additional cost to the State. These projects shall be measured by a long fixed interval (528-foot) surface MRI and meet the higher value of the following requirements:

A 50% improvement in MRI from the existing surface
OR
80 inches per mile

In the case that 50% of the existing surface MRI is greater than 80 inches per mile, the short continuous threshold shall be increased from 160 inches per mile by the difference between 50% of the existing surface MRI and 80 inches per mile.

For all projects, areas of the surface lift with localized roughness greater than 160 inches per mile as determined by the continuous short interval (25') report will be identified for correction by the Project Engineer.

When a project has multiple lifts, the lift underlying the surface lift shall have a MRI of no more than 10 inches/mile more than the surface lift threshold for both long and short continuous intervals. Category B projects containing multiple lifts must meet the Category C percent improvement requirement for the underlying lift. Corrective action must be taken on those segments that do not meet this requirement. No unit price adjustment will be applied on any underlying lift.

For Category A and B projects, a unit price increase will be added when the MRI for the final surface lift, prior to any required localized roughness (short interval) corrective action, is less than or equal to fifty inches per mile (50.0 inches / mile) on the long interval report. These Projects will be considered for incentive pay based on the following guidelines for the long interval surface lift MRI.

Mean Roughness Index inches / mile	Contract Price Adjustment Percent of Asphalt Unit Bid Price
Less than 35.0	108
35.1 to 40.0	106
40.1 to 45.0	104
45.1 to 50.0	102
50.1 to Required Surface MRI	100

In addition to the above pay incentive factors, a project may be subject to a disincentive when the Long Continuous Interval MRI for the surface exceeds the allowable tolerance.

Mean Roughness Index (inches / mile)	Contract Price Adjustment Percent of Asphalt Unit Bid Price
Above 20.0 Over	REMOVE AND REPLACE
15.1 to 20.0 Over	80
10.1 to 15.0 Over	85
5.1 to 10.0 Over	90
0.1 to 5.0 Over	95
Required Surface MRI	100

For Category C projects, segments may be subject to a disincentive when the Fixed Interval MRI for the surface does not meet the minimum requirements.

Percent Improvement MRI (inches/mile)	Contract Price Adjustment Percent of Asphalt Unit Bid Price
Below 30 Percent	REMOVE AND REPLACE
30.1 to 35.0 Percent	80
35.1 to 40.0 Percent	85
40.1 to 45.0 Percent	90
45.1 to 50.0 Percent	95
Above 50%	100

Segment(s) or portions thereof representing areas excluded from a smoothness test shall also be excluded from consideration for a contract price adjustment for rideability. Where a segment less than 528 feet occurs at the end of a section, it will be combined with the preceding 528-foot segment for calculation of MRI. Corrective action must be taken on those sections that exceed the 'Remove and Replace' threshold as directed by the Project Engineer. The minimum remove and replace length will be 528 feet (0.1 mile). Additional smoothness testing shall be required on sections following replacement and will be required to meet *at least* the maximum surface MRI short of 'Remove and Replace' tolerance.

The above pay factors will be applied in conjunction with the Long Continuous Histogram Chart from ProVAL's Smoothness Assurance Module. The price adjustments for rideability will be tabulated in MDOT's Pay Incentive spreadsheet on the basis of a theoretical tonnage of 110 lbs/yd² * inch thickness (pounds per square yard * inch thickness) determined in accordance with Subsections 907-401.02.6.5 and 907-403.04, for the segment(s) or portions thereof for which an adjustment is warranted.

907-403.03.3--Thickness Requirements. Asphalt overlay lifts shall be constructed as nearly in accordance with the thickness shown on the plans as the underlying pavement and foundation will permit. Periodic and cumulative yield tests will be made to determine practicable conformity to the thickness of each lift. The Engineer may order modifications in placement thicknesses to prevent unwarranted variations in plan quantities.

When the paver is operating off an established grade line, no thickness determination will be

required for the various lifts of pavement. It is understood that the tolerances from design grade will control the thickness requirements.

When grade stakes are eliminated by Notice to Bidders or as outlined in Subsection 907-403.03.2(d) and where resulting in the placement of two (2) or more lifts, acceptance and payment will be determined on a lot to lot basis by cores taken from the completed pavement. Lots will be coincidental with acceptance lots for the surface lift as provided in Subsection 907-401.02.6.4, except that only lots resulting from the placement of mainline surface lift will be used for thickness assessment. One core will be obtained at random from each lot. Irregular areas will not be cored.

When the average thickness of all the cores from the lots representing a day's production, excluding any discarded by the Engineer for justifiable reason, is within three-eighths of an inch ($3/8''$) of the total pavement thickness shown on the plans, excluding lift(s) placed using an established grade line, corrective action will not be required and a price adjustment will not be made for non-conformity to specified thickness.

When the average thickness of all the cores from the lots representing a day's production is deficient in thickness by more than three eighths of an inch ($3/8''$) of the total pavement thickness shown on the plans, excluding lift(s) placed using an established grade line, the deficiency shall be corrected by overlaying the entire length of the day's production. The thickness of the overlay shall be equal to the thickness deficiency but no less than the minimum single lift laying thickness for the specified mixture.

When the thickness of all the cores from the lots representing a day's production is more than three eighths of an inch ($3/8''$) thicker than the total thickness shown on the plans, excluding lift(s) placed using an established grade line, a price adjustment will be made in accordance with Subsection 907-403.05.1.

The cores shall be cut and removed by the Contractor in the presence of the Engineer's representative and turned over to the Engineer's representative for further handling. The Contractor shall fill each core hole with surface lift mixture and compact to the satisfaction of the Engineer within 24 hours after coring.

907-403.03.4--Lift Corrections. Pavement exceeding the allowable surface tolerances shall be corrected at the Contractor's expense by the following methods:

Lower, Leveling and Lower Intermediate Lifts:

- (a) Removal or addition of mixture by skin patching, feather edging, wedge lift construction or full depth patching where appropriate and can be completed in a satisfactory manner.
- (b) Superimposing an additional layer which shall be an approved grade raise for the full roadway width and length of the area to be corrected.

Top Intermediate Lift:

- (a) Removal and the addition of sufficient mixture to provide the specified thickness. Corrections by this method shall be square or rectangular in shape and shall completely cover the area to be corrected.
- (b) Superimposing an additional layer of minimum lift thickness for mixture being used which shall be an approved grade raise for full roadway width of the area to be corrected. Transverse joints shall be perpendicular to the centerline of the pavement.

Surface Lift:

- (a) Removal and the addition of sufficient mixture to provide new material of at least minimum single lift laying thickness for full lane width of the area to be corrected. Transverse joints shall be perpendicular to the centerline of the lane.
- (b) Superimposing an additional layer (minimum lift thickness for mixture being used) which shall be an approved grade raise for full roadway width of the area to be corrected. Transverse joints shall be perpendicular to the centerline of the pavement.

All mixtures used in the correction of unacceptable pavement shall be approved by the Engineer prior to use.

907-403.03.5--Overlays or Widening and Overlays. In addition to the requirements of Subsections 907-403.03.1 through 907-403.03.4, the following requirements will be applicable when an existing pavement is to be overlaid or widened and overlaid.

907-403.03.5.1--Blank.

907-403.03.5.2--Sequence of Operations. In order to expedite the safe movement of traffic and to protect each phase of the work as it is performed, a firm sequence of operations is essential. Unless otherwise provided in the traffic control plan and/or the contract, the following appropriate items of work shall be begun and continually prosecuted in the order listed:

- (a) In sections designated by the Engineer, trim the shoulders along the pavement edges to provide drainage from the pavement.
- (b) Perform pre-rolling to locate areas of pavement with excessive movement per Section 511.
- (c) Perform selective undercutting and patching as directed per Subsection 907-403.03.5.4.
- (d) Perform pressure grouting as specified in Section 512.
- (e) Clean and seal joints per Section 413.
- (f) Complete preparation on one side of roadway to be widened and place widening

materials.

- (g) Reconstruct shoulders to elevation necessary to assure traffic safety.
- (h) Open the widened section to traffic.
- (i) Complete above work for other side of roadway.
- (j) Perform preliminary leveling as directed.
- (k) Apply interlayer as specified.
- (l) Place the first overall leveling lift.
- (m) After the first overall leveling lift, reconstruct shoulders as necessary to eliminate vertical differentials which may be hazardous to traffic.
- (n) Place first intermediate lift.
- (o) Construct shoulders to the contiguous elevation of the first intermediate lift.
- (p) Place remaining intermediate lift, if required.
- (q) Place surface lift.
- (r) Complete construction of shoulders.
- (s) Apply permanent traffic marking.
- (t) Final cleanup.

The above operations shall be performed in such a manner that traffic will be maintained on a paved surface at all times. Two-lane, two-way highways should not be restricted to a single lane in excess of a 3,000-foot section.

907-403.03.5.3--Widening of Pavement. The foundation for widening shall be formed by trenching or excavating to the required depth and constructing a smooth, firm and compacted foundation. It shall have sufficient density and stability to withstand the placement and compaction of subsequent lifts. Soft, yielding and other unsuitable material which the Engineer determines will not compact readily shall be removed and backfilled with granular material or asphalt as directed.

Except as provided herein, excavation for widening, undercutting or other required excavation shall be spread along the edge of the shoulders, foreslopes or other adjacent areas as directed and will be an absorbed item. When the quantity is in excess of what may be used satisfactorily on adjacent areas, the Engineer may direct that the material be loaded, hauled and spread uniformly

on other designated areas. In this case, compensation for handling surplus material will be in accordance with the appropriate pay items as provided in the contract or as extra work.

If the plans require widening of the shoulders or embankment with Contractor furnished material, all suitable material obtained from widening excavation may be used and will be measured and paid for as Contractor furnished materials. No measurement for payment of haul will be made.

Removal and disposal of old stakes, forms and other debris encountered in excavating shall be in accordance with Section 201 and shall be considered as incidental to and included in the unit prices bid for other items. No separate measurement will be made therefor. Pavement edges and surfaces shall be cleaned prior to final shaping and compaction of adjacent trenching or undercut areas.

Granular material for widening shall be placed on a previously prepared, smooth, firm and unyielding foundation in accordance with the typical section. Density of the granular material shall be as specified.

Asphalt for widening, including trench widening, shall meet the applicable requirements of Section 907-401, Section 907-403, and shall be placed in one or more layers as shown on the plans or directed. The surface of the mixture shall be finished as a continuation of the adjacent pavement slope.

Trench rollers or other compaction equipment shall be used to compact the foundation, granular material and bituminous mixtures for widening when standard width rolling equipment cannot be used.

907-403.03.5.4--Patching. Existing pavement which has failed or unsatisfactorily stabilized shall be removed as directed. Removal of pavement will be measured and paid for under the appropriate pay items as provided in the contract.

Backfill shall consist of asphalt or a combination of compacted layers of aggregate material and asphalt. Unless otherwise specified, the Engineer will make this determination based on depth and field conditions.

Asphalt used for backfilling will be measured and paid for at the contract unit price for the mixture designated on the plans as the lowest lift. Aggregate will be measured and paid for under the appropriate pay item as provided in the contract or as extra work.

907-403.03.5.5--Preliminary Leveling. All irregularities of the existing pavement, such as ruts, cross-slope deficiencies, etc., shall be corrected by spot leveling, skin patching, feather edging or a wedge lift in advance of placing the first overall lift.

907-403.03.5.6--Placement of Lifts. The leveling lift shall be placed in a layer, or layers, not exceeding approximately two and one-half inches compacted thickness.

When single lane construction is required, placement of a lift on the adjacent lane may be performed by an approved profile averaging device provided the lane previously placed is within the allowable tolerances for all surface requirements. When any of the tolerances are exceeded, the Contractor shall reestablish the control stringline for laying the adjacent lane should the Contractor elect to perform this work prior to correcting the deficiencies of the lane previously placed. In no case shall a "matching shoe" be used to control the grade of an adjacent lane.

In instances where there are only minor deviations from the allowable tolerances in the first overall lift, the Engineer may permit the Contractor to place the next higher lift by graded stringline in lieu of making the corrections.

Single lane placement of leveling, intermediate and surface lifts shall be limited to the distance covered in one and one-half days in advance of that placed in the adjacent lane.

907-403.03.5.7--Protection of Pavement. The pavement shall be protected and properly maintained until it has been compacted and cooled sufficiently for use by traffic.

907-403.04--Method of Measurement. Asphalt pavement, of the type specified, will be measured by the ton. The weight of the composite mixture shall be determined in accordance with the provisions of Subsection 907-401.03.2.1.11.

The pay quantities for each individual job mix formula (JMF) will be calculated using the approved JMF maximum specific gravity (Gmm) and the following formulas.

When the composite mixture has a maximum specific gravity of 2.540 or less,

$$T_p = T_w$$

When the composite mixture has a maximum specific gravity greater than 2.540,

$$T_p = T_w((100 - (((Gmm * A * B) - C) / (Gmm * A * B)) * 100)) / 100$$

Where:

- T_p = Total tonnage for payment
- T_w = Total tonnage weighed, used and accepted
- Gmm = Maximum Specific Gravity of the approved composite asphalt mixture
- A = 46.725 lbs/yd²/in
- B = 0.93 = 93% density
- C = 110.374 lbs/yd²/in = Theoretical density at 2.540 Gmm

Unless shown as a separate pay item, the furnishing and application of the tack coat will not be measured for payment. When payment is provided, tack coat will be measured as set out in Section 407.

Joint sealant will be measured by the linear foot for each joint sealed.

The quantity of bituminous mixture required to correct the work, when made at the expense of the Contractor, will not be measured for payment.

Any trenching required for widening will not be measured for payment, such cost thereof shall be included in other items of work.

Undercut required by the Engineer will be measured for payment under the appropriate excavation item as provided in the contract or as extra work. Pavement removal and any required trenching will not be included in the measurement for undercut.

Class "B" structural concrete base substituted for asphalt under portland cement concrete bridge end pavement, as per Subsection 502.03.1, will be paid for as asphalt calculated as follows:

Square yards of portland cement concrete bridge end pavement x concrete base thickness in inches x 0.055 = tons of asphalt.

907-403.05--Basis of Payment. Subject to the adjustments set out in Subsections 907-401.02.6.3, 907-401.02.6.4, 907-401.02.6.5 & 907-403.03.2, asphalt pavement, measured as prescribed above, will be paid for at the contract unit price per ton for each lift of pavement specified in the bid schedule and shall be full compensation for completing the work.

Joint sealant will be paid for at the contract unit price per linear foot for each joint which shall be full compensation for furnishing the joint sealant material, cleaning the joint, applying the sealant, and for all equipment, tools, labor, and incidentals necessary to complete the work.

907-403.05.1--Price Adjustment for Thickness Requirement. When grade stakes are eliminated as provided in Subsection 907-403.03.3 and the average thickness of all cores from lots representing a day's production is more than three eighths of an inch (3/8") thicker than the total specified thickness of the pavement, excluding lift(s) placed using an established grade line, a lump sum reduction in payment for the surface lift of lots representing a day's production will be made as follows:

Individual Day's = (Monetary Value of the Day's x $\frac{(D - 3/8)}{ST}$)
L.S. Reduction Surface Lift Production)

Where:

D = The day's average deviation from total pavement thickness shown on the plans, excluding lift(s) placed using an established grade line.

ST = Specified thickness for surface lift.

The total L.S. reduction for the project is the summation of the individual day's reductions in payment.

907-403.05.2--Pay Items.

Payment will be made under:

907-403-A: <u>(1)</u> , <u>(4)</u> , Asphalt Pavement	- per ton
907-403-B: <u>(2)</u> , <u>(4)</u> , Asphalt Pavement, Leveling	- per ton
907-403-C: <u>(3)</u> , <u>(4)</u> , Asphalt Pavement, Trench Widening	- per ton
907-403-D: <u>(2)</u> , HT, Asphalt Pavement, Polymer Modified	- per ton
907-403-E: <u>(2)</u> , HT, Asphalt Pavement, Polymer Modified, Leveling	- per ton
907-403-S: Joint Sealant	- per linear foot or mile

- (1) 4.75-mm mixture, 9.5-mm mixture, 12.5-mm mixture, 19-mm mixture, or 25-mm mixture
- (2) 4.75-mm mixture, 9.5-mm mixture, 12.5-mm mixture, or 19-mm mixture
- (3) 19-mm mixture or 25-mm mixture
- (4) ST, MT or HT

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-407-2

CODE: (SP)

| DATE: 07/22/2014

SUBJECT: Tack Coat

Section 407, Tack Coat, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-407.02.1--Bituminous Material. Delete the second sentence of the first paragraph of Subsection 407.02.1 on page 281, and substitute the following:

When not specified, the materials shall be as specified in Table 410-A on page 293.

907-407.03.3--Application of Bituminous Material. Delete the first paragraph of Subsection 407.03.3 on page 281, and substitute the following.

Tack coat shall be applied with a distributor spray bar. A hand wand will only be allowed for applying tack coat on ramp pads, irregular shoulder areas, median crossovers, turnouts, or other irregular areas. Bituminous materials and application rates for tack coat shall be as specified in Table 410-A on page 293. Tack coat shall not be applied during wet or cold weather, or to a wet surface. Emulsions shall be allowed to "break" prior to superimposed construction.

907-407.05--Basis of Payment. Delete the pay item at the end of Subsection 407.05 on page 282, and substitute the following:

907-407-A: Asphalt for Tack Coat *

- per gallon

* Grade may be specified

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-626-25

CODE: (IS)

DATE: 11/13/2012

SUBJECT: Thermoplastic Traffic Markings

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-626.01--Description. After the last sentence of the first paragraph of Subsection 626.01 on page 443, add the following.

All pavement marking material, excluding edge lines over rumble strips, shall be applied using the extrusion/ribbon method. Edge lines placed over rumble strips shall be applied using the atomization/spray method.

907-626.03.1.1--Equipment. After the second paragraph of Subsection 626.03.1.1 on page 444, add the following.

When edge lines are placed over rumble strips, the equipment must be able to apply the marking material using the atomization/spray method instead of extrusion/ribbon method.

907-626.03.1.2--Construction Details. Delete the second sentence of the first full paragraph of Subsection 626.03.1.2 on page 445, and substitute the following.

Unless otherwise specified in the plans or contract documents, the thickness shall be 90 mils for edge lines, center lines, lane lines, barrier lines and detail stripe including gore markings, and 120 mils for crosswalks, stop lines, and railroad, word and symbol markings.

After the last sentence of the third full paragraph of Subsection 626.03.1.2 on page 445, add the following.

When double drop thermoplastic stripe is called for in the contract, additional beads by the drop-on method shall be applied as follows.

Class A glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.
Class B glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.

The Class B glass beads shall be applied to the newly placed stripe first, followed by the application of the Class A glass beads.

907-626.05--Basis of Payment. Delete the pay items listed on page 446 and substitute the following.

907-626-A: 6" Thermoplastic* Traffic Stripe, Skip White	- per linear foot or mile
907-626-B: 6" Thermoplastic* Traffic Stripe, Continuous White	- per linear foot or mile
907-626-C: 6" Thermoplastic* Edge Stripe, Continuous White	- per linear foot or mile
907-626-D: 6" Thermoplastic* Traffic Stripe, Skip Yellow	- per linear foot or mile
907-626-E: 6" Thermoplastic* Traffic Stripe, Continuous Yellow	- per linear foot or mile
907-626-F: 6" Thermoplastic* Edge Stripe, Continuous Yellow	- per linear foot or mile
907-626-G: Thermoplastic* Detail Stripe, <u>Color</u>	- per linear foot
907-626-H: Thermoplastic* Legend, White	- per linear foot or square foot

* Indicate Double Drop if applicable



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-71

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Tuscan Ave Sidewalk Project-Construction Contract

Title: Approve and Authorize Mayor to execute contract between the City of Hattiesburg and RJM McQueen Contracting, Inc. in the amount of \$ 292,692.68 for construction services related to the Tuscan Ave Sidewalk Project (Project No. STP 7197-00(002)/LPA 106879-701000).

Type: Action Item

Drafter: Marie Harris

In Control: City Council

Reference: Lamar
Rutland

Attachments: Tuscan Ave Project Contract, Revised - Tuscan Ave.
Project Contract

File
Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication
Information:

History of Legislative File

*SPECIAL PROVISIONS, PROPOSAL AND CONTRACT DOCUMENTS
FOR
THE CONSTRUCTION OF SIDEWALK
FEDERAL AID PROJECT NUMBER
STP 7197-00(002) LPA/106879-701000*

***TUSCAN AVENUE SIDEWALK PROJECT
FOR THE
CITY OF HATTIESBURG
HATTIESBURG, MISSISSIPPI
FORREST COUNTY***



2016

PREPARED BY



6/30/2016



**BIDDER CHECK LIST
(FOR INFORMATION ONLY)**

- _____ All unit prices and item totals have been entered in accordance with Subsection 102.06 of the Mississippi Standard Specifications for Road and Bridge Construction.
- _____ First sheet of SECTION 905--PROPOSAL has been completed.
- _____ Second sheet of SECTION 905--PROPOSAL has been completed and signed.
- _____ Addenda, if any, have been acknowledged. Second sheet of Section 905 listing the addendum number has been substituted for the original second sheet of Section 905. Substituted second sheet of Section 905 has been properly completed, signed, and added to the proposal.
- _____ DBE/WBE percentage, when required by contract, has been entered on last sheet of the bid sheets of SECTION 905--PROPOSAL.
- _____ Form OCR-485-LPA has been completed and signed.
- _____ The last sheet of the bid sheets of SECTION 905--PROPOSAL has been signed.
- _____ Equal Opportunity Clause Certification, when included in contract, has been completed and signed.
- _____ The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been executed in duplicate.
- _____ A certified check, cashier's check or bid bond payable to the Local Public Agency in the principle amount of 5% of the bid has been included with project number identified on same. Bid bond has been signed by the bidder and has also been signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent for the Surety with Power of Attorney attached.
- _____ The Notice to Bidders regarding DUNS Requirements has been completed and included in the contract documents.

Return the proposal and contract documents in its entirety in a sealed envelope. DO NOT remove any part of the contract documents; exception – an addendum requires substitution of second sheet of Section 905. A stripped proposal is considered as an irregular bid and will be rejected.

Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

CONTENTS

PROJECT: TUSCAN AVENUE SIDEWALK PROJECT
PROJECT NO. STP-7197-00(002)LPA/106879-701000
CITY OF HATTIESBURG, MISSISSIPPI

Bidder's Checklist

Section 901 - Advertisement for Bids

Section 904 - Notice to Bidders

#1:	Governing Specifications
#2LPA:	Designating Owner and Engineer
#3:	Final Cleanup
#151:	Gopher Tortoises
#640:	Fiber Reinforced Concrete
#1322:	Non-use of Precast Drainage Units
#1405:	Errata and Modifications to the 2004 Standard Specifications
#1546:	Advancement of Materials
#1902LPA:	Disadvantaged Business Enterprise Forms
#1928:	Federal Bridge Formula
#2168:	Fuel and Material Adjustments
#2382:	Status of Right of Way
#2382:	Attachments for Status of Right of Way
#4214:	Safety Apparel
#4488:	DBE Forms, Participation and Payment
#4565:	Manual on Uniform Traffic Control Devices
#4566:	DUNS Requirement
#5053:	Contractor Correspondence
#5266LPA:	Supplement to Disadvantage Business Enterprise
#5266:	Disadvantage Business Enterprise
#5405:	Traffic Control Devices
#5412:	Weight Limits
#5865LPA:	Sampling and Testing of Concrete on Small LPA Projects
#5866LPA:	Payroll Requirements
#7001:	Contract Time

Section 906 - County Wage Rates
Supplement to Form FHWA-1273
Required Federal Contract Provision Form FHWA-1273
Executive Order 11246

Section 907 -

907-101-4:	Definitions
907-102-4LPA:	Bidding Requirements and Conditions
907-103-11:	Award and Execution of Contract
907-104-5:	Scope of Work
907-105-8:	Control of Work

907-107-13:	Supplement to Legal Relations & Responsibility to Public
907-107-13:	Legal Relations & Responsibility to Public
907-108-37LPA:	Supplement to Prosecution and Progress
907-108-37LPA:	Prosecution and Progress
907-109-8:	Measurement and Payment
907-110-2:	Wage Rates
907-213-2:	Agricultural Limestone
907-216-1:	Solid Sodding
907-237-4:	Wattles
907-246-3:	Sandbags
907-601-1:	Structural Concrete
907-603-8:	Culverts and Storm Drains
907-618-13:	Temporary Construction Signs
907-626-25:	Thermoplastic Traffic Markings
907-701-5:	Supplement to Hydraulic Cement
907-701-5:	Hydraulic Cement
907-708-6:	Non Metal Drainage Structures
907-709-1:	Metal Pipe
907-711-4:	Synthetic Structural Fiber Reinforcement
907-713-6:	Admixtures for Concrete
907-714-8:	Miscellaneous Materials
907-715-4:	Roadside Development Materials
907-720-2:	Pavement Marking Materials
907-804-19:	Supplement to Concrete Bridges and Structures
907-804-19:	Concrete Bridges and Structures

Construction Progress Schedule

Section 905 - Proposal

- Proposal, Proposal Sheet
- Bid Sheets
- Certification of Performance – Prior Federal Aid Projects
- Affidavit Regarding Non-Collusion, Debarment and Suspension

Section 902 - Contract Form

Section 903 - Contract Bond Forms

Executive Compensation Certification

Guidance for Federal Spending Transparency

OCR-481-LPA – Disadvantaged Business Enterprise List

OCR-485-LPA – List of Firms Submitting Quotes

(Revisions to the Above Will Be Indicated on the Second Sheet of Section 905 as Addenda)

SECTION 901 - ADVERTISEMENT FOR BIDS

CITY OF HATTIESBURG FORREST COUNTY, MISSISSIPPI

NOTICE TO CONTRACTORS

TUSCAN AVENUE SIDEWALK PROJECT – FEDERAL-AID PROJECT NO. STP 7197-00(002) LPA/106879-701000

Sealed bids will be received by the City of Hattiesburg, at the City Clerk's office, located at 200 Forrest Street, Hattiesburg, Mississippi 39401, until 10:00 a.m. local time, on Thursday, October 27, 2016 for supplying all labor, equipment, and materials (as specified) necessary for the construction of the above referenced project. All bids so received will be publicly opened and read aloud.

Work consists of constructing an 8' wide concrete sidewalk along Tuscan Avenue from Martin Luther King Avenue to Cherry Street, along Tuscan Avenue from Arledge Street to Edwards Street, and a 6' wide concrete sidewalk along Tuscan Avenue from Cherry Street to Arledge Street, as well as, minor drainage improvements.

The above general outline of features of the work does not in any way limit the responsibility of the contractor to perform all work and furnish all plant, labor, equipment and materials required by the specifications and the drawings referred to therein.

Plans, contract documents and special provisions and proposal forms are on file for public inspection in the office of the City of Hattiesburg, City Clerk's Office located at 200 Forrest Street, Hattiesburg, Mississippi 39401 and in the office of Neel-Schaffer, Inc., Post Office Box 1487, Hattiesburg, MS 39403-1487 (704 Hardy Street, Telephone No. 601-545-1565). One copy of the contract documents and special provisions together with the contract plans may be procured from Neel-Schaffer, Inc. upon payment of \$100.00, none of which is refundable.

The attention of bidders is directed to the Special Provisions governing selection and employment of labor.

Minimum wage rates for Federal-Aid projects have been predetermined by the Secretary of Labor and are subject to Public Law 87-581 Work Hours Act of 1962, as set forth in the Special Provisions. Minimum wage rates for all other projects have been predetermined and set forth in advertised specifications.

The City of Hattiesburg hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged and women's business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The award of this contract will be contingent upon the Contractor satisfying the DBE/WBE requirements.

The 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction, adopted by the Mississippi Department of Transportation, as referred to herein, may be purchased from the Mississippi Department of Transportation.

Each bid shall be accompanied by a Certified Check on a solvent bank or a Bidder's Bond issued by a Surety Company licensed to operate in the State of Mississippi, in the amount of five percent (5%) of the total bid price, payable to the City of Hattiesburg as bid security. Bidders shall also submit a current financial statement, if requested by the City. The successful bidder will be required to furnish a performance and payment bond in the amount of 100 percent of the contract amount. Both bonds shall be signed or countersigned by a Mississippi Resident Agent.

The proposal and contract documents in its entirety shall be submitted in a sealed envelope and deposited with the City Clerk, 200 Forrest Street, Hattiesburg, Mississippi prior to the hour and date above designated.

The City of Hattiesburg reserves the right to reject any or all proposals, to waive technicalities or irregularities, or to advertise for new proposals, and the decision of the City of Hattiesburg to reject any bid or proposal shall not be cause for any liability or damages against the City of Hattiesburg, any officers or employees.

The bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within the Contract Time. The bidder must also agree to pay as liquidated damages the sum specified in the Standard Specifications per day for each calendar day of overrun in Contract Time that work is not completed.

Work to be performed shall be in accordance with the "Mississippi State Highway Standard Specifications for Road and Bridge Construction, 2004", together with all amendments and/or special provisions and/or addenda to the standards duly approved and adopted, unless otherwise noted in these specifications.

The attention of Bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.

City Clerk
City of Hattiesburg, Mississippi

Dates of Publication:

September 25, 2016

October 2, 2016

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Governing Specifications

The current (2004) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation Commission is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained herein. Copies of the specification book may be purchased from the MDOT Construction Division.

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal contain references to the 1990 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2004 Edition of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 2 LPA

CODE: (SP)

DATE: 02/03/2015

SUBJECT: Designating Owner and Engineer (Hattiesburg, Mississippi)

PROJECT: STP-7197-00(002) /106879-701000, Forrest County

Any reference in the Contract Documents to the State of Mississippi, Mississippi Department of Transportation, Mississippi Transportation Commission, or any official thereof shall be interpreted to mean *City of Hattiesburg*, the "Owner".

Any reference in the Standard Specifications to the Project Engineer, District Engineer, Office Engineer, or Engineer shall be interpreted to mean the *Engineer for City of Hattiesburg, Mississippi, Neel-Schaffer, Inc.*

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3

CODE: (SP)

DATE: 05/03/2004

SUBJECT: Final Clean-Up

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such as glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 151

CODE: (IS)

DATE: 06/18/2004

SUBJECT: Gopher Tortoises

Bidders are hereby advised that the Contractor will be required to make special considerations regarding gopher tortoises on this project. In addition to the normal required documentation associated with borrow pits, the Contractor shall, for each site used to obtain or dispose of materials associated with this project, provide the Engineer with a letter from a qualified biologist certifying that the site was inspected prior to any clearing of vegetation or disposal of project materials and that the site is not inhabited by gopher tortoises, or appropriate avoidance measures have been installed. No individual lacking the proper State or Federal license shall touch or otherwise harass a gopher tortoise.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 640

CODE: (IS)

| DATE: 09/26/2005

SUBJECT: Fiber Reinforced Concrete

Bidders are hereby advised that synthetic structural fibers meeting the requirements of Subsection 907-711.04 may be used in lieu of wire mesh in some items of construction. Substitution of fibers for wire mesh will be allowed in the construction of paved ditches, paved flumes, paved inlet apron, driveways, guard rail anchors and pile encasements. Substitution in any other items of work must be approved by the State Construction Engineer prior to use.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1322

CODE: (SP)

DATE: 1/22/2007

SUBJECT: Non-Use of Precast Drainage Units

Bidders are hereby advised that the use of precast inlets and junction boxes will **NOT** be allowed on this project. Subsection 601.02.3 states that " the Contractor may request approval from the Engineer to furnish and install precast units in lieu of cast-in-place units". Should the Contractor make this request, the request will be denied.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1405

CODE: (IS)

DATE: 03/15/2007

SUBJECT: ERRATA AND MODIFICATIONS TO THE 2004 STANDARD SPECIFICATIONS

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
101	201.01	In the second sentence of the first paragraph, change “salvable” to “salvageable”.
107	202.04	In the fourth sentence of the fourth paragraph, change “yard” to “feet”.
107	202.05	In the list of units measurements for 202-B, add “square foot”.
132	211.03.4	In the second sentence of the second paragraph, change “planted” to “plated”.
192	306.02.4	In the first line of the first paragraph, delete the word “be”.
200	307.03.7	In the fourth sentence of the second paragraph, change “lime-fly ash” to “treated”.
236	401.01	Change the header from “Section 403” to “Section 401”.
242	401.02.3.2	In the first sentence of the third full paragraph, add “1/8” in the blank before the inch mark.
250	401.02.6.3	In the second sentence of the first paragraph on page 250, change “rutting over ” ” to “rutting over 1/8" ”.
253	401.02.6.4.2	In the paragraph preceding the table, change “91.0” to “89.0”.
259	401.03.1.4	In the first paragraph, change “92.0 percent” to “the specified percentage (92.0 or 93.0)”.
269	403.03.2	In the table at the top of page 269, change the PI requirement from “ = ” to “ ≤ ”.

278	404.04	In the second sentence, change the subsection from "401.04" to "403.04".
283	409.02.2	Change "PG 64-22" to "PG 67-22".
294	413.02	In the first sentence of the second paragraph, change "707.02.1.3" to "Subsection 707.02.1.3".
340	511.04	In the second sentence of the second paragraph, change "412" to "512".
349	601.03.3	In the first sentence, change "804.03.2" to "804.03.5".
355	603.02	Change the subsection reference for Joint mortar from "707.03" to "714.11".
369	604.04	In the first sentence, change "601.04" to "Subsection 601.04".
427	619.04	Delete the second paragraph.
442	625.04	In the third paragraph, change "626.04" to "Subsection 626.04".
444	626.03.1.2	Delete the third sentence of the first paragraph.
464	631.02	Change the subsection reference for Water from "714.01.0" to "714.01.1".
570	682.03	Change the subsection number from "682-03" to "682.03".
575	683.10.4	Change the subsection number from "683.10.4" to "683.04".
575	683.10.5	Change the subsection number from "683.10.5" to "683.05".
596	701.02	In the table under the column titled "Cementations material required", change Class F, FA" to "Class F FA,".
603	702.11	In the first sentence, change "702.12" to "Subsection 702.12".
612	703.04.2	In the fifth paragraph, delete "Subsection 703.11 and".
616	703.07.2	In the Percentage By Weight Passing Square Mesh Sieves table, change the No. 10 requirement for Class 7 material from "30 - 10" to "30 - 100".

618	703.13.1	In the first sentence of the first paragraph, change “703.09” to “703.06”.
618	703.13.2	In the first sentence, change “703.09” to “703.06”.
671	712.06.2.2	In the first sentence, change “712.05.1” to “Subsection 712.05.1”.
689	714.11.2	In the first sentence, change “412” to “512”.
709	715.09.5	In the first sentence of the first paragraph, change “guage” to “gauge”.
717	717.02.3.4	In the top line of the tension table, change “1 1/2” to “1 1/8” and change “1 1/8” to “1 1/2”.
741	720.05.2.2	In the last sentence of this subsection, change “720.05.2.1” to “Subsection 720.05.2.1”.
827	803.03.2.3.7.5.2	In the first sentence of the second paragraph, change “803.03.5.4” to “803.03.2.3.4”.
833	803.03.2.6	In the first sentence, change “803.03.7” to “803.03.2.5”.
854	804.02.11	In the last sentence of the first paragraph, change “automatically” to “automatic”.
859	804.02.13.1.3	In the last sentence, change Subsection “804.02.12.1” to “804.02.12”.
879	804.03.19.3.2	In the first sentence of the third paragraph, change “listed on of Approved” to “listed on the Approved”.
879	804.03.19.3.2	In the last sentence of the last paragraph, change “804.03.19.3.1” to “Subsection 804.03.19.3.1”.
962	814.02.3	In the first sentence, change “710.03” to “Subsection 710.03”.
976	820.03.2.1	In the first sentence, change “803.02.6” to “803.03.1.7”.
976	820.03.2.2	In the first sentence, change “803.03.9.6” to “803.03.1.9.2”.
985	Index	Change the subsection reference for Petroleum Asphalt Cement from “702.5” to “702.05”.

985	Index	Change the subsection reference for the Definition of Asphaltic Cement or Petroleum Asphalt from "700.2" to "700.02".
985	Index	Change the subsection reference for Automatic Batchers from "501.03.2.4" to "804.02.10.4".
986	Index	Delete "501.03.2" as a subsection reference for Batching Plant & Equipment.
988	Index	Change the subsection reference for the Central Mixed Concrete from "501.03.3.2" to "804.02.11".
988	Index	Change the subsection reference for the Concrete Batching Plant & Equipment from "501.03.2" to "804.02.11".
999	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers.
1001	Index	Change the subsection reference for Edge Drain Pipes from "605.3.5" to "605.03.5".
1002	Index	Change the subsection reference for Metal Posts from "713.05.2" to "712.05.2".
1007	Index	Change the subsection reference for Coarse Aggregate of Cement Concrete Table from "703.3" to "703.03".
1007	Index	Change the subsection reference for Composite Gradation for Mechanically Stabilized Courses Table from "703.8" to "703.08".
1009	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers and Truck Agitators.
1010	Index	Delete reference to "Working Day, Definition of".

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1546

CODE: (SP)

DATE: 05/23/2007

SUBJECT: Advancement of Materials

Bidders are advised that **NO ADVANCEMENT OF MATERIALS**, as addressed in Subsection 109.06.2 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1902 LPA

CODE: (SP)

DATE: 02/26/2010

SUBJECT: Disadvantaged Business Enterprise (DBE) Forms

Anywhere in the plans, proposal and specifications where reference is made to Office of Civil Rights (OCR) Forms, it should be understood to mean Disadvantaged Business Enterprise (DBE) Forms.

The following are equivalent forms:

OCR-481	.....	OCR-481 LPA	.....	DBE-1
OCR-482	.....	OCR-482 LPA	.....	DBE-2
OCR-483	.....	OCR-483 LPA	.....	DBE-3
OCR-484	.....	OCR-484 LPA	.....	DBE-4
OCR-485	.....	OCR-485 LPA	.....	DBE-5
OCR-487	.....	OCR-487 LPA	.....	DBE-7

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 1928

CODE: (IS)

| DATE: 04/14/2008

SUBJECT: Federal Bridge Formula

Bidders are hereby advised that Federal Highway Administration Publication No. FHWA-MC-94-007, **BRIDGE FORMULA WEIGHTS**, dated January 1994, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration
400 7th Street, SW
Washington, DC 20590
(202) 366-2212

or

| http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc_page.htm

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2168

CODE: (SP)

DATE: 11/03/2008

SUBJECT: Fuel and Material Adjustments

Bidders are advised that **NO FUEL OR MATERIAL ADJUSTMENT**, as addressed in Subsection 109.07 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 2382

CODE: (IS)

| DATE: 02/12/2009

| SUBJECT: Status of Right-of-Way

Although it is desirable to have acquired all rights-of-way and completed all utility adjustments and work to be performed by others prior to receiving bids, sometimes it is not considered to be in the public interest to wait until each and every such clearance has been obtained. The bidder is hereby advised of possible unacquired rights-of-way, relocatees and utilities which have not been completed.

| The status of right-of-way acquisition, utility adjustments, [encroachments](#), potentially contaminated sites [and asbestos containment](#) are set forth in [the following](#) attachments.

In the event right of entry is not available to ALL parcels of right-of-way and/or all work that is to be accomplished by others on the date set forth in the contract for the Notice to Proceed is not complete, the Department will issue a restricted Notice to Proceed.

Mark C. McConnell
Deputy Executive Director/
Chief Engineer

Charles R. Carr
Director
Office of Intermodal Planning



Melinda L. McGrath
Executive Director

Lisa M. Hancock
Deputy Executive Director/
Administration

Willie Huff
Director
Office of Enforcement

P. O. Box 1850 / Jackson, MS 39215-1850 / Telephone (601) 359-7001 / FAX (601) 359-7110 / GoMDOT.com

June 2, 2015

Mr. Andrew Hughes
Division Administrator
FHWA-Mississippi Division
100 West Capitol Street, Suite 1062
Jackson, MS 39269

RE: STP-7197-00(002) LPA
106879-701000
Tuscan Avenue Sidewalk Project
City of Hattiesburg
Forrest County

Dear Mr. Hughes:

RIGHT-OF-WAY CERTIFICATION

This project will be constructed on existing right of way or other real property previously acquired and owned by the above referenced city, county or agency. Since no additional acquisition of right of way or other real property interests are required, there are no relocatees, improvements or contaminated sites involved in this project.

Attached:

Status of Right of Way
Encroachment Status
Hazardous Waste Status
Asbestos Abatement Status
Utility Status

Mr. Andrew Hughes
June 2, 2015
Page 2

Very truly yours,

RIGHT OF WAY DIVISION

A handwritten signature in cursive script that reads "Stephen D. Downing".

Stephen D. Downing
Assistant Division Administrator

DD:ar

Pc: Chief Engineer (65-01)
LPA Division (77-01)
Construction Engineer (73-01)
District Six (26-01)
Project Engineer (26-01 PE)
Facility & Records Management (89-20)

**STATUS OF RIGHT-OF-WAY
STP-7197-00(002) LPA
106879-701000
Tuscan Avenue Sidewalk Project
FORREST COUNTY
June 2, 2015**

All rights of way and legal rights of entry have been acquired except:

Exceptions: Utilities in conflict with the project construction will be adjusted as follows: 1) AT&T phone lines to be transferred to new poles prior to construction with completion date by 9-15-15; 2) Old utility poles to be removed prior to construction with a completion date by 9-30-15



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

RIGHT-OF-WAY STATUS REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

There is no right-of-way required for this project. All work shall be completed within the limits of the existing right-of-way.

The City of Hattiesburg certifies that, the real property interest acquired for the project is adequate for the construction, operation, and maintenance of the resulting facility and for the protection of both the facility and the traveling public.

Signed:

A handwritten signature in dark ink, appearing to read "Lamar Rutland".

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Brudley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

RIGHT-OF-WAY ENCROACHMENT REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

This is to certify that a physical survey of the right-of-ways to be used in the construction of this project revealed that there are no encroachments on the subject project.

The City of Hattiesburg (LPA) certifies that any encroachments that remain in place shall not cause delays to construction of the project, nor shall inhibit maintenance of traffic or constitute safety hazards to the public. The LPA certifies that the LPA will accept full financial responsibility for any damage caused, or delay claims that arise in the whole or in part due to the failure of the LPA to remove the encroachments. Any additional construction cost incurred as a result of working around these encroachments will be paid by the LPA as a non-reimbursable expense. The safety of the public will not be comprised as a result of not moving the encroachments. Future maintenance of the project will not be adversely affected by the encroachments.

Signed:

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

HAZARDOUS WASTE SITE REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

This is to certify that a physical survey of the right-of-ways to be used in the construction of this project revealed that there are no areas suspected of having any hazardous waste or underground storage tanks.

Signed

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

ASBESTOS ABATEMENT REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

This is to certify that the project components do not contain any known asbestos containing materials.

Signed:

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

UTILITY REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

The status of utilities are as follows:

AT&T – Phone lines to be transferred to new poles prior to construction with a completion date by 9/15/2015.

Old utility poles to be removed prior to construction with a completion date by 9/30/2015.

This is to certify that arrangements have been made as indicated above for the adjustment of all utility facilities as required for coordination with the physical construction schedules. As noted, the Contractor's operations should not be adversely affected.

The City of Hattiesburg understands that any claim by the contractor due to NOT having the utilities relocated will be a non-participating item. In the event the utility facilities are discovered to be in conflict, damaged, or otherwise impact the proposed construction, the LPA shall bare all responsibility and/or claims associated with these facilities. Furthermore, the LPA shall indemnify and hold harmless the Mississippi Department of Transportation, the Mississippi Transportation Commission, and its representatives in the event that damages and/or claims should arise.

There are no other known utilities in conflict with the proposed project.

Signed:

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
Inter-Departmental Memorandum

TO: Mr. David Seyfarth
District LPA Engineer (16-10)

DATE: May 29, 2015

FROM: Mr. Jared Brogan
Hattiesburg Project Office (16-13)

SUBJECT OR PROJECT NO: STP-7197-00(002)LPA/106879-701000
Tuscan Avenue Sidewalk Project
City of Hattiesburg

COUNTY: Forrest

INFORMATION COPY TO:

Jeff Altman- State LPA Engineer (77-01)
Kelly Castleberry- District 6 Engineer (26-01)
Ashlyn Brock- Right of Way Officer (26-01)

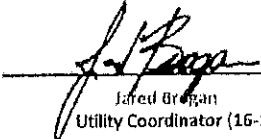
Geoffrey Crosby-Neel-Schaffer, Inc.
Lamar Rutland-City of Hattiesburg
Project File (16-13)

STATUS OF UTILITY RELOCATION WORK

AT&T: The identified conflicts will be addressed prior to construction by the owner with the telephone lines transferred to new poles by September 15, 2015 and the old poles removed by September 30, 2015.

There are no other known utility conflicts at this time.

This is to certify that any required adjustments to facilities owned by the above mentioned utility companies have been completed to the best of my knowledge and are acceptable in accordance with the terms of the agreement between the owner and the LPA. Said adjustments are located within the limits of the above mentioned LPA project.


Jared Brogan
Utility Coordinator (16-13)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4214

CODE: (IS)

DATE: 11/29/2012

SUBJECT: Safety Apparel

Bidders are advised that the Code of Federal Regulations CFR 23 Part 634 final rule was adopted November 24, 2006 with an effective date of November 24, 2008. This rule requires that "All workers within the right-of-way of a Federal-Aid Highway who are exposed either to traffic (vehicles using the highway for the purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel". High-visibility safety apparel is defined in the CFR as "personnel protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2004 publication entitled American National Standard for High-Visibility Safety Apparel and Headwear". All workers on Mississippi State Highway right-of-way shall comply with this Federal Regulation. Workers are defined by the CFR as "people on foot whose duties place them within the right-of way of a Federal-Aid Highway, such as highway construction and maintenance forces, survey crews, utility crews, responders to incidents within the highway right-of-way, and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way of a Federal-Aid Highway".

More information regarding high visibility safety apparel can be found at the following sites.

<http://www.gpo.gov/fdsys/pkg/CFR-2008-title23-vol1/pdf/CFR-2008-title23-vol1-sec634-1.pdf>

<http://ops.fhwa.dot.gov/wz/resources/policy.htm#hv>

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4488 LPA

CODE: (IS)

DATE: 05/01/2013

SUBJECT: DBE Forms, Participation and Payment

Bidders are hereby advised that the participation of a DBE Firm cannot be counted towards the Prime Contractor's DBE goal until the amount being counted towards the goal has been paid to the DBE.

Form OCR-482-LPA has been developed to comply with this requirement. Bidders are hereby advised that at the end of the job, the Prime Contractor will submit this form to the Project Engineer before the final estimate is paid and the project is closed out. This form certifies payments to all DBE Subcontractors over the life of the contract.

Form OCR-484-LPA has also been developed to comply with this requirement. Bidders are hereby advised that each month, the Prime Contractors will submit this form to the Project Engineer no later than the last day of each month. This form certifies payments to all Subcontractors and shows all firms even if the Prime Contractor has paid no monies to the firm during that estimate period (negative report). The Project Engineer will attach this form to the monthly estimate before forwarding the estimate to the Local Public Agency (LPA) Division for processing.

Bidders are also advised that Form OCR-485-LPA will be completed by ALL BIDDERS submitting a bid proposal and must be signed and included in the bid proposal package. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

DBE Forms, including Forms OCR-482-LPA, OCR-484-LPA and OCR-485-LPA, can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at www.gomdot.com under *Business, Disadvantaged Enterprise, Applications and Forms for the DBE Program, MDOT Forms*.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4565

CODE: (SP)

DATE: 06/27/2013

SUBJECT: Manual on Uniform Traffic Control Devices

Any reference in the Standard Specifications or contract documents to a particular Section of the Manual on Uniform Traffic Control Devices (MUTCD) it shall mean that Section of the latest version of the Manual on Uniform Traffic Control Devices.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4566

CODE: (SP)

DATE: 07/02/2013

SUBJECT: DUNS Requirement for Federal Funded Projects

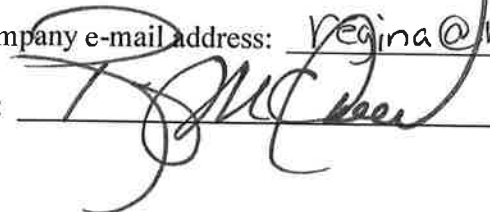
Bidders are advised that the Prime Contractor must maintain current registrations in the Central Contractor Registration (<http://www.sam.gov>) at all times during this project. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (<http://www.dnb.com>) is one of the requirements for registration in the Central Contractor Registration.

Bidders are also advised that the following information needs to be completed and included in the bid documents:

DUNS: 062646948

Company Name: RSM-McQueen Contracting, Inc.

Company e-mail address: Regina@rjmmcqueen.com

By: 

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5053

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Contractor Correspondence

Bidders are advised that all correspondence concerning this project, other than correspondence related to the execution of the contract and sub-contracting, shall be sent to the Project Engineer. The Project Engineer will then forward any necessary correspondence to the appropriate Division. This includes general correspondence, submittals, shop drawings, requests for advancement of materials, etc.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO NOTICE TO BIDDERS NO. 5266 LPA

DATE: 11/15/2014

The goal is 3% percent for the Disadvantaged Business Enterprise. The low bidder is required to submit Form OCR-481 for all DBEs.

Delete the third paragraph under CONTRACT GOAL on page 2, and substitute the following.

The apparent lowest responsive bidder shall submit to the LPA Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 3rd business day after opening of the bids.

LPA Projects: Delete entire Pre-Bid Section at the top of page 6.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5266

CODE: (IS)

| DATE: 11/12/2014

**SUBJECT: DISADVANTAGED BUSINESS ENTERPRISES IN FEDERAL-AID
HIGHWAY CONSTRUCTION**

This contract is subject to the "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations". Portions of the Act are set forth in this Notice as applicable to compliance by the Contractor and all of the Act, and the MDOT DBE Program, is incorporated by reference herein.

The Department has developed a Disadvantaged Business Enterprise Program that is applicable to this contract and is made a part thereof by reference.

Copies of the program may be obtained from:

Office of Civil Rights
Mississippi Department of Transportation
P. O. Box 1850
Jackson, Mississippi 39215-1850

POLICY

It is the policy of the Mississippi Department of Transportation to provide a level playing field, to foster equal opportunity in all federally assisted contracts, to improve the flexibility of the DBE Program, to reduce the burdens on small businesses, and to achieve that amount of participation that would be obtained in a non-discriminatory market place. In doing so, it is the policy of MDOT that there will be no discrimination in the award and performance of federally assisted contracts on the basis of race, color, sex, age, religion, national origin, or any handicap.

ASSURANCES THAT CONTRACTORS MUST TAKE

MDOT will require that each contract which MDOT signs with a sub-recipient or a Contractor, and each subcontract the Prime Contractor signs with a Subcontractor, includes the following assurances:

“The Contractor, subrecipient or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MDOT deems appropriate.”

DEFINITIONS

For purposes of this provision the following definitions will apply:

"Disadvantaged Business" means a small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individual(s) or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individual(s); and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individual(s) who own it. It is important to note that the business owners themselves must control the operations of the business. Absentee ownership or title ownership by an individual who does not take an active role in controlling the business is not consistent with eligibility as a DBE under CFR 49 Part 26.71.

CONTRACTOR'S OBLIGATION

The Contractor and all Subcontractors shall take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of a portion of the work in this contract and shall not discriminate on the basis of race, color, national origin, religion or sex. Failure on the part of the Contractor to carry out the DBE requirements of this contract constitutes a breach of contract and after proper notification the Department may terminate the contract or take other appropriate action as determined by the Department.

When a contract requires a zero percent (0%) DBE goal, the Contractor still has the responsibility to take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of the work in the contract. In this case, all work performed by a certified DBE firm is considered to be a "race neutral" measure and the Department will receive DBE credit towards the overall State goals when the DBE firm is paid for their work. If the Prime Contractor is a certified DBE firm, the Department can receive DBE credit only for the work performed by the Prime Contractor's work force or any work subcontracted to another DBE firm. Work performance by a non-DBE Subcontractor is not eligible for DBE credit.

CONTRACT GOAL

The goal for participation by DBEs is established for this contract in the attached Supplement. The Contractor shall exercise all necessary and reasonable steps to ensure that participation is equal to or exceeds the contract goal.

The percentage of the contract that is proposed for DBEs (1% or greater) shall be so stated on the last bid sheet of the proposal.

The apparent lowest responsive bidder shall submit to the Office of Civil Rights Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 3rd business day after opening of the bids.

Form OCR-481 is available on the MDOT website at GoMDOT.com, then Divisions, Civil Rights, Forms, DBE, MDOT Projects, or by calling 601-359-7466.

FORMS ARE AVAILABLE FROM THE OFFICE OF CIVIL RIGHTS

The OCR-481 Form must contain the following information:

The name and address of each certified DBE Contractor / Supplier;

The Reference Number, percent of work and the dollar amount of each item. If a portion of an item is subcontracted, a breakdown of that item including quantities and unit price must be attached, detailing what part of the item the DBE firm is to perform and who will perform the remainder of the item.

If the DBE Commitment shown on the last bid sheet of the proposal, does not equal or exceed the contract goal, the bidder must submit, with the proposal, information to satisfy the Department that adequate good faith efforts have been made to meet the contract goal.

Failure of the lowest bidder to furnish acceptable proof of good faith efforts, submitted with the bid proposal, shall be just cause for rejection of the proposal. Award may then be made to the next lowest responsive bidder or the work may be readvertised.

The following factors are illustrative of matters the Department will consider in judging whether or not the bidder has made adequate good faith effort to satisfy the contract goal.

- (1) Whether the bidder attended the pre-bid meeting that was scheduled by the Department to inform DBEs of subcontracting opportunities;
- (2) Whether the bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
- (3) Whether the bidder provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;
- (4) Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested;
- (5) Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goal;
- (6) Whether the bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
- (7) Whether the bidder negotiated in good faith with interested DBEs and did not reject them as unqualified without sound reasons based on a thorough investigation of their capabilities; and

- (8) Whether the bidder made efforts to assist interested DBEs in obtaining any required bonding or insurance.
- (9) Whether the bidder has written notification to certified DBE Contractors soliciting subcontracting for items of work in the contract.
- (10) Whether the bidder has a statement of why an agreement was not reached.

The bidder's execution of the signature portion of the proposal shall constitute execution of the following assurance:

The bidder hereby gives assurance pursuant to the applicable requirements of "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations" that the bidder has made a good faith effort to meet the contract goal for DBE participation for which this proposal is submitted.

DIRECTORY

A list of "Certified DBE Contractors" which have been certified as such by the Mississippi Department of Transportation and other Unified Certification Partners (UPC) can be found on the Mississippi Department of Transportation website at www.gomdot.com. The DBE firm must be certified at the time the project is let and approved by MDOT to count towards meeting the DBE goal.

REPLACEMENT

If a DBE Subcontractor cannot perform satisfactorily, and this causes the OCR-481 commitment to fall below the contract goal, the Contractor shall take all necessary reasonable steps to replace the DBE with another certified DBE Subcontractor or submit information to satisfy the Mississippi Department of Transportation that adequate good faith efforts have been made to replace the DBE. The replacement DBE must be a DBE who was on the Department's list of "Certified DBE Contractors" when the job was let, and who is still active. All DBE replacements must be approved by the Department.

Under no circumstances shall the Prime or any Subcontractor perform the DBE's work (as shown on the OCR-481) without prior written approval from the Department. See "Sanctions" at the end of this document for penalties for performing DBE's work.

When a Contractor proposes to substitute/replace/terminate a DBE that was originally named on the OCR-481, the Contractor must obtain a release, in writing, from the named DBE explaining why the DBE Subcontractor cannot perform the work. A copy of the original DBE's release must be attached to the Contractor's written request to substitute/replace/terminate along with appropriate Subcontract Forms for the substitute/replacement/terminated Subcontractor, all of which must be submitted to the DBE Coordinator and approved, in advance, by MDOT.

GOOD FAITH EFFORTS

To demonstrate good faith efforts to replace any DBE that is unable to perform successfully, the Contractor must document steps taken to subcontract with another certified DBE Contractor. Such documentation shall include no less than the following:

- (1) Proof of written notification to certified DBE Contractors by certified mail that their interest is solicited in subcontracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.
- (2) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (3) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (4) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (5) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (6) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (7) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (8) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

Failure of the Contractor to demonstrate good faith efforts to replace a DBE Subcontractor that cannot perform as intended with another DBE Subcontractor, when required, shall be a breach of contract and may be just cause to be disqualified from further bidding for a period of up to 12 months after notification by certified mail.

PRE-BID MEETING

A pre-bid meeting will be held in Amphitheater 1 & 2 of the Hilton Jackson located at I-55 and County Line Road, Jackson, Mississippi at 2:00 P.M. on the day preceding the date of the bid opening.

This meeting is to inform DBE firms of subcontracting and material supply opportunities. Attendance at this meeting is considered of prime importance in demonstrating good faith effort to meet the contract goal.

PARTICIPATION / DBE CREDIT

Participation shall be counted toward meeting the goal in this contract as follows:

- (1) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (2) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (3) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (4) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (5) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (6) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (7) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

AWARD

Award of this contract to the low bidder will be contingent upon the following conditions:

- (1) Concurrence from Federal Highway Administration, when applicable.
- (2) Bidder must submit to the Office of Civil Rights for approval, Form OCR-481 (DBE Commitment) no later than the 3rd business day after opening of the bids, or submit information with the bid proposal to satisfy the Department and that adequate good faith efforts have been made to meet the contract goal. For answers to questions regarding Form OCR-481, contact the MDOT Office of Civil Rights at (601) 359-7466.
- (3) Bidder must submit an OCR-485 listing all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. Form OCR-485 must be signed and submitted with the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

Prior to the start of any work, the bidder must notify the Project Engineer, in writing, of the name of the designated "DBE Liaison Officer" for this project. This notification must be posted on the bulletin board at the project site.

DEFAULT

The contract goal established by MDOT in this proposal of 1% or greater must be met to fulfill the terms of the contract. The Contractor may list DBE Subcontractors and items that exceed MDOT's contract goal, but should unforeseen problems arise that would prevent a DBE from completing its total commitment percentage, the Contractor will meet the terms of the contract as long as it meets or exceeds MDOT's Contract Goal. For additional information, refer to "Replacement" section of this Notice.

DBE REPORTS

- (1) OCR-481: Refer to "CONTRACT GOAL" section of this Notice to Bidders for information regarding this form.
- (2) OCR-482: At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form OCR-482 whereby the Contractor certifies to the amounts of payments made to each Contractor / Supplier. The Project Engineer shall submit the completed Form OCR-482 to the DBE Coordinator (Office of Civil Rights). Final acceptance of the project is dependent upon Contract Administration Division's receipt of completed Form OCR-482 which they will receive from the Office of Civil Rights.
- (3) OCR-483: The Project Engineer/Inspector will complete Form OCR-483, the Commercially Useful Function (CUF) Performance Report, in accordance with MDOT

S.O.P. No. OCR-03-09-01-483. Evaluations reported on this form are used to determine whether or not the DBE firm is performing a CUF. The Prime Contractor should take corrective action when the report contains any negative evaluations. DBE credit may be disallowed and/or other sanctions imposed if it is determined the DBE firm is not performing a CUF. This form should also be completed and returned to the DBE Coordinator (Office of Civil Rights).

- (4) OCR-484: Each month, the Contractor will submit to the Project Engineer OCR-484 certifying payments to all Subcontractors. This OCR-484 will be attached to the monthly estimate for further processing. Failure of the Contractor to submit the OCR-484 will result in the estimate not being processed or paid.
- (5) OCR-485: Bidder must submit signed form with bid proposal of all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.
- (6) OCR-487: Only used by Prime Contractors that are certified DBE firms. This form is used in determining the exact percentage of DBE credit for the specified project. It should be returned to MDOT with the OCR-481 form, or can also be returned with the Permission to Subcontract Forms (CAD-720, CAD-725 and CAD-521).

SANCTIONS

The Department has the option to enforce any of the following penalties for failure of the Prime Contractor to fulfill the DBE goal as stated on the OCR-481 form or any violations of the DBE program guidelines:

- (1) Disallow credit towards the DBE goal
- (2) Withhold progress estimate payments
- (3) Deduct from the final estimate or recover an amount equal to the unmet portion of the DBE goal which may include additional monetary penalties as outlined below based on the number of offenses and the severity of the violation as determined by MDOT.

1 st Offense	10% of unmet portion of goal	or	\$5,000 lump sum payment	or	Both
2 nd Offense	20% of unmet portion of goal	or	\$10,000 lump sum payment	or	Both
3 rd Offense	40% of unmet portion of goal	or	\$20,000 lump sum payment	or	\$20,000 lump sum payment and debarment
- (4) Debar the Contractor involved from bidding on Mississippi Department of Transportation projects.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5405

CODE: (SP)

| DATE: 02/11/2015

SUBJECT: Traffic Control Devices

Bidders are advised of the following two changes regarding traffic control devices.

Flashing Arrow Panels

| In Subsection 619.02.5 of the Standard Specifications, it states that flashing arrow panels shall meet the requirements of Section 6F.53 of the MUTCD. The new MUTCD has changed this reference to Section 6F.61. Flashing arrow panels on this project must meet the requirements of Section 6F.61 of the latest MUTCD.

Type III Barricade Rails

The use of 2-inch nominal thickness timber for rails on Type III barricades has not been approved by NCHRP as a crashworthy device. Therefore, the use of 2-inch nominal thickness timbers will not be allowed for rails on Type III Barricades. Timber rails for Type III Barricades shall be as follows.

- For barricades up to four feet (4') wide, the maximum thickness of timber rails shall be one inch (1") and the material shall be pine timber or ¾-inch ACX plywood.
- For barricades more than four feet (4') wide, timber rails shall be constructed of ¾-inch ACX plywood.

A list of crashworthy Type III Barricades can be found at the below FHWA website.

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5412

CODE: (SP)

DATE: 02/18/2015

SUBJECT: Weight Limits

Bidders are hereby advised that all trucks hauling materials to and from this project shall comply with the legal weight limits as established by law. MDOT will not compensate the Contractor for any portion of a load delivered to the project in excess of the legal limit for that truck.

Vehicles relying on harvest permits are limited to hauling only those materials set forth in Section 27-19-81(4) of the Mississippi Code, as amended.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5865 LPA

CODE: (SP)

DATE: 11/30/2015

SUBJECT: Sampling and Testing of Concrete on Small LPA Projects

Bidders are advised that the following concrete items will be tested at a reduced amount and will not be accepted based on the Quality Control / Quality Assurance (QC/QA) requirements of Section 804 of the specifications.

<u>Section</u>	<u>Description</u>
221	Paved Ditches
601	Minor Structures - manholes, inlets, catch basins, junction boxes, pipe headwalls, and pipe collars.
605	Edge Drain and Underdrain Outlet Pads
606	Guardrail Anchors
607	Fence Post Footings
608	Sidewalks
609	Curb and Gutter
614	Driveways
616	Median and Island Pavement
630	Sign Footings, except Overhead Sign Supports

The material requirements for the above pay items are as follows:

1. Cement and aggregates for concrete items shall be from approved sources. Concrete shall be produced from a concrete batch plant which has a current plant calibration. The Project Engineer shall furnish plant inspection as deemed necessary for control. The producer shall furnish with each load of concrete a delivery ticket containing the following information:
 - a. Project Number
 - b. Class Concrete
 - c. Weight of Cement
 - d. Free Water in Aggregate (gallons)
 - e. Weight of Fine Aggregate
 - f. Weight of Coarse Aggregate
 - g. Water in Mix (gallons)
 - h. Number of Revolutions Mixed
 - i. Time of Batching
2. The Contractor is required to submit mix designs to accomplish this work in accordance with Section 804.
3. A set of three cylinders, slump test, and air test will be performed on the first day of production for each mix design. The compressive strength test shall be the average of three cylinders.
4. An additional set of cylinders, slump test, and air test will be performed at a minimum of rate of one per 100 cubic yards of mix produced.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5866 LPA

CODE: (SP)

| DATE: 10/28/2015

SUBJECT: Payroll Requirements

Bidders are hereby advised that the Contractor and Subcontractor(s) are required to submit payroll information to the Project Engineers on a weekly basis.

On Federal-Aid Projects, LPA-880, LPA-881 and certified payroll submissions are required each week the Contractor or a Subcontractor performs work on the project. This is addressed in Section IV of Form FHWA-1273.

On State-Funded Projects, LPA-880 is required each week the Contractor or a Subcontractor performs work on the project.

| When no work is performed on either Federal-Aid or State-Funded Projects, the Contractor should only submit LPA-880 showing no work activities.

The Contractor shall make all efforts necessary to submit this information to the Project Engineer in a weekly manner. The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to submit the required information. Submission of forms and payrolls shall be current through the first full week of the month for the estimate period in order for the Project Engineer to process an estimate.

Bidders are advised to review the requirements regarding payroll submissions in Section 110 of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 7001

CODE: (SP)

DATE: 1/7/2015

SUBJECT: Contract Time

PROJECT:

The completion of work to be performed by the Contractor for this project will not be a specified date but shall be when all allowable working days are assessed, or any extension thereto as provided in Subsection 907-108.06.

The Notice of Award will be issued within 60 days of the bid opening date and the effective date of the Notice to Proceed / Beginning of Contract Time Date will be within two months following the Date of the Notice of Execution of Contract Letter.

The Contractor shall request a Notice to Proceed / Beginning of Contract Time Date after receiving the Notice of Execution of Contract Letter and the date requested should be within the two month period following the Date of the Notice of Execution of Contract Letter.

Should the Contractor not request a Notice to Proceed Date within the two months allowed, the date for the Notice to Proceed / Beginning of Contract Time will be two months after the Date of the Notice of Execution of Contract Letter.

58 Working Days have been allowed for the completion of work on this project.

A Preconstruction Conference as required by Subsection 907-108.03.2 should be held prior to commencement of any field work by the Contractor.

General Decision Number: MS160235 04/08/2016 MS235

Superseded General Decision Number: MS20150235

State: Mississippi

Construction Type: Highway

County: Forrest County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	04/08/2016

* ELEC0903-006 12/01/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 25.30	12.5%+4.00

SUMS2010-054 08/04/2014

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 12.00	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 11.54	1.63
HIGHWAY/PARKING LOT STRIPING:		
Truck Driver (Line Striping		
Truck).....	\$ 14.55	0.00
INSTALLER - SIGN.....	\$ 12.19	0.00
INSTALLER: Guardrail.....	\$ 12.39	0.00
IRONWORKER, REINFORCING.....	\$ 16.44	0.00
LABORER: Common or General,		
Including Asphalt Raking,		
Shoveling, Spreading.....	\$ 10.34	0.00
LABORER: Flagger.....	\$ 11.42	0.00
LABORER: Grade Checker.....	\$ 14.82	0.00
LABORER: Luteman.....	\$ 12.88	0.00

LABORER: Mason Tender -		
Cement/Concrete.....	\$ 10.57	0.00
LABORER: Pipelayer.....	\$ 14.50	0.00
LABORER: Laborer-Cones/ Barricades/Barrels -		
Setter/Mover/Sweeper.....	\$ 12.17	0.00
OPERATOR: Asphalt Spreader.....	\$ 14.71	0.00
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 14.20	0.00
OPERATOR: Bobcat/Skid		
Steer/Skid Loader.....	\$ 11.86	0.00
OPERATOR: Broom/Sweeper.....	\$ 10.94	0.00
OPERATOR: Bulldozer.....	\$ 13.99	0.00
OPERATOR: Concrete Saw.....	\$ 13.93	0.00
OPERATOR: Crane.....	\$ 14.80	0.00
OPERATOR: Distributor.....	\$ 11.46	0.00
OPERATOR: Grader/Blade.....	\$ 16.09	0.00
OPERATOR: Loader.....	\$ 13.99	0.00

OPERATOR: Mechanic.....	\$ 13.00	0.00
OPERATOR: Milling Machine.....	\$ 16.96	0.00
OPERATOR: Oiler.....	\$ 12.22	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 11.56	0.00
OPERATOR: Roller (All Types)....	\$ 12.17	0.00
OPERATOR: Scraper.....	\$ 14.00	0.00
OPERATOR: Tractor.....	\$ 12.00	0.00
SURVEYOR (Staking, Marking and Brush Clearing).....	\$ 11.56	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 14.72	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 14.18	0.00
TRUCK DRIVER: Mechanic.....	\$ 12.31	0.00
TRUCK DRIVER: Water Truck.....	\$ 17.08	0.00
TRUCK DRIVER: Dump Truck (All Types).....	\$ 11.58	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 14.36	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of

the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material,

etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

SUPPLEMENT TO FORM FHWA-1273

DATE: 01/06/2016

SUBJECT: Final Certificate and Contract Provisions for Subcontracts

All subcontracts shall be in writing and contain all pertinent provisions and requirements of the prime contract.

Each "Request for Permission to Subcontract" (Mississippi Department of Transportation Form CAD-720) shall include a copy of subcontract upon request for review by the Mississippi Department of Transportation. The federal contract provisions may be omitted from the subcontract copy submitted for review provided the Contractor certifies that the provisions will be physically incorporated into the agreement furnished to the Subcontractor.

In lieu of submitting a copy of the subcontract for review, the Contractor may certify that the subcontract agreement is in writing and that it contains all the requirements and pertinent provisions of the prime contract.

Each Subcontractor will be required to provide a copy of the subcontract agreement for contract compliance reviews, along with physical evidence (copy of FHWA-1273) that requirements and pertinent provisions have been provided for review and adherence.

The Contractor is hereby advised of the requirements set forth in the following Attachment (Title 46 - Shipping) as it pertains to the implementation of Cargo Preference Act (CPA) requirements in the Federal-aid Highway Program.

By signing this contract, the Contractor agrees to conform to the requirements of the CPA.

Attachment

Title 46- Shipping

Volume: 8

Date: 2014-10-01

Original Date: 2014-10-01

Title: Section 381.7 - Federal Grant, Guaranty, Loan and Advance at Funds Agreements.

Context: Title 46- Shipping. CHAPTER II- MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTATION. SUBCHAPTER J - MISCELLANEOUS. PART 381 - CARGO PREFERENCE-U.S.- FLAG VESSELS.

§ 381.7 Federal Grant, Guaranty, Loan and Advance of Funds Agreements.

In order to insure a fair and reasonable participation by privately owned United States-flag commercial vessels in transporting cargoes which are subject to the Cargo Preference Act of 1954 and which are generated by U.S. Government Grant, Guaranty, Loan and/or Advance of Funds Programs, the head of each affected department or agency shall require appropriate clauses to be inserted in those Grant, Guaranty, Loan and/or Advance of Funds Agreements and all third party contracts executed between the borrower/grantee and other parties, where the possibility exists for ocean transportation of items procured, contracted for or otherwise obtained by or on behalf of the grantee, borrower, or any of their contractors or subcontractors. The clauses required by this part shall provide that at least 50 percent of the freight revenue and tonnage of cargo generated by the U.S. Government Grant, Guaranty, Loan or Advance of Funds be transported on privately owned United States-flag commercial vessels. These clauses shall also require that all parties provide to the Maritime Administration the necessary shipment information as set forth in § 381.3. A copy of the appropriate clauses required by this part shall be submitted by each affected agency or department to the Secretary, Maritime Administration, for approval no later than 30 days after the effective date of this part. The following are suggested acceptable clauses with respect to the use of United States-flag vessels to be incorporated in the Grant, Guaranty, Loan and/or Advance of Funds Agreements as well as contracts and subcontracts resulting therefrom:

(a) *Agreement Clauses.* "Use of United States-flag vessels:

"(1) Pursuant to Pub. L 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

"(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees --

"(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

"(2) To furnish within 20 days following the date of loading for shipments originating within the United

States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

"(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract."

(Reorganization Plans No.21 of 1950(64 Stat. 1273) and No. 7 of 1961 (75 Stat. 840) as amended by Pub. L 91.469 (84 Stat 1036) and Department of Commerce Organization Order 10-8 (38 FR 19707, July 23, 1973)) (42 FR 57126, Nov. 1, 1977]

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goal for female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work, is 6.9%.

Until further notice	Goals for minority participation for each trade (percent)
SHSA Cities:	
Pascagoula - Moss Point -----	16.9
Biloxi - Gulfport -----	19.2
Jackson -----	30.3
SMSA Counties:	
Desoto -----	32.3
Hancock, Harrison, Stone-----	19.2
Hinds, Rankin -----	30.3
Jackson -----	16.9
Non-SMSA Counties:	
George, Greene-----	26.4
Alcorn, Benton, Bolivar, Calhoun, Carroll, Chickasaw, Clay, Coahoma, Grenada, Itawamba, Lafayette, Lee, Leflore, Marshall, Monroe, Montgomery, Panola, Pontotoc, Prentiss, Quitman, Sunflower, Tallahatchie, Tate, Tippah, Tishomingo, Tunica, Union, Washington, Webster, Yalobusha -----	
	26.5
Attala, Choctaw, Claiborne, Clarke, Copiah, Covington, Franklin, Holmes, Humphreys, Issaquena, Jasper, Jefferson, Jefferson Davis, Jones Kemper, Lauderdale, Lawrence, Leake, Lincoln, Lowndes, Madison, Neshoba, Newton, Noxubee, Oktibbeha, Scott, Sharkey, Simpson, Smith, Warren, Wayne, Winston, Yazoo-----	
	32.0
Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall-----	
	27.7
Adams, Amite, Wilkinson -----	30.4

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4.2(d). Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is to the county and city (if any), stated in the advertisement.

5. The notification required in Paragraph 3 shall be addressed to the following:

Contract Compliance Officer
Mississippi Department of Transportation
P.O. Box 1850
Jackson, Mississippi 39215-1850

(06/28/2012)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-101-4

CODE: (IS)

DATE: 11/05/2008

SUBJECT: Definitions

Section 101, Definitions and Terms, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-101.02--Definitions. Replace the following definitions in Subsection 101.02 on pages 3 through 13.

Contract - The written agreement between the Mississippi Transportation Commission and the Contractor setting forth the obligations of the parties thereunder, including but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract includes the invitation for bids, proposal, contract form and contract bonds, specifications, supplemental specifications, interim specifications, general and detailed plans, special provisions, notices to bidders, notice to proceed, and also any agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

Contract Bonds - The approved form of security, executed by the Contractor and the Contractor's Surety(ies), guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the project. This term includes Performance and Payment Bond(s).

Surety - A corporate body, qualified under the laws of Mississippi, which is bound with and for the successful bidder by "contract bond(s)" to guarantee acceptable performance of the contract and payment of all legal taxes and debts pertaining to the construction of the project, including payment of State Sales Tax as prescribed by law, and any overpayment made to the Contractor.

Add the following to the list of definitions in Subsection 101.02 on pages 3 through 13.

Performance Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing satisfactory completion of the contract and all supplemental agreements pertaining thereto.

Payment Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing the payment of all legal debts pertaining to the construction of the project including, but not limited to, the labor and materials of subcontractors and suppliers to the prime contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-4 LPA

CODE: (SP)

DATE: 04/29/2014

SUBJECT: Bidding Requirements and Conditions

907-102.06--Preparation of Proposal. Delete the fifth, sixth, seventh, eighth, and ninth paragraphs of Subsection 102.06 on page 18.

907-102.08--Proposal Guaranty. Delete the two paragraphs in Subsection 102.08 on page 20 and substitute the following:

No proposal will be considered unless accompanied by certified check, cashier's check or bid bond, made payable to the LPA listed in the contract, in an amount of not less than five percent (5%) of the total amount of the proposal offered. The guaranty shall be evidence of good faith that, if awarded the contract, the bidder will execute the contract and give performance and payment contract bond(s) as stipulated in Subsection 907-103.05.1, 907-103.05.2, and as required by law.

If a bid bond is offered as guaranty, the bond must be on a form approved by the Chief LPA Official, made by a Surety acceptable to the Chief LPA Official and signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent and the Bidder. Such bid bond shall also conform to the requirements and conditions stipulated in Subsection 907-103.05.2 as applicable.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-103-11

CODE: (SP)

| DATE: 07/22/2015

SUBJECT: Award and Execution of Contract

Section 103, Award and Execution of Contract, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-103.04--Return of Proposal Guaranty. Delete the second paragraph of Subsection 103.04 on page 23 and substitute the following:

Certified checks or cashier's checks submitted as proposal guaranties, except those of the two lowest bidders, will be returned within 10 days of contract award. The retained proposal guaranty of the unsuccessful of the two lowest bidders will be returned within ten days following the execution of a contract with the successful low bidder. The retained proposal guaranty of the successful bidder will be returned after satisfactory performance and payment bonds have been furnished and the contract has been executed.

In the event all bids are rejected by the Commission, certified checks or cashier's checks submitted as proposal guaranty by all bidders will be returned within 10 days of rejection.

Delete Subsection 103.05 on page 23 and substitute the following:

907-103.05--Contract Bonds.

907-103.05.1--Requirement of Contract Bonds. Prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director a performance and payment bond(s), in a sum equal to the full amount of the contract as a guaranty for complete and full performance of the contract and the protection of the claimants and the Department for materials and equipment and full payment of wages in accordance with Section 65-1-85 Miss. Code Ann. (1972 as amended). In the event of award of a joint bid, each individual, partnership, firm or corporation shall assume jointly the full obligations under the contract and the contract bond(s).

907-103.05.2--Form of Bonds. The form of bond(s) shall be that provided by or acceptable to the Department. These bonds shall be executed by a Mississippi agent or qualified nonresident agent and shall be accompanied by a certification as to authorization of the attorney-in-fact to commit the Surety company. A power of attorney exhibiting the Surety's original seal supporting the Mississippi agent or the qualified nonresident agent's signature shall be furnished with each bond. The Surety company shall be currently authorized and licensed in good standing to conduct business in the State of Mississippi with a minimum rating by A.M. Best of (A-) in the latest printing "Best's Key Rating Guide" to write individual bonds up to ten percent of the policy holders' surplus or listed on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as

published by the United States Department of the Treasury, Financial Management Service, Circular 570 (latest revision as published and supplemented on the Financial Management Service Web site and in the Federal Register) within the underwriting limits listed for that Surety. The Mississippi agent or qualified nonresident agent shall be in good standing and currently licensed by the Insurance Commissioner of the State of Mississippi to represent the Surety company(ies) executing the bonds.

Surety bonds shall continue to be acceptable to the Commission throughout the life of the Contract and shall not be canceled by the Surety without the consent of the Department. In the event the Surety fails or becomes financially insolvent, the Contractor shall file a new Bond in the amount designated by the Executive Director within thirty (30) days of such failure, insolvency, or bankruptcy. Subsequent to award of Contract, the Commission or the Department may require additional security for any supplemental agreements executed under the contract or replacement security in the event of the surety(ies) loss of the ratings required above. Suits concerning bonds shall be filed in the State of Mississippi and adjudicated under its laws without reference to conflict of laws principles.

907-103.08--Failure to Execute Contract. In the first sentence of Subsection 103.08 on page 24, change “bond” to “performance and payment bonds”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-104-5

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Scope of Work

Section 104, Scope of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-104.05--Removal and Disposal of All Materials From the Project. Delete the second sentence of the first full paragraph of Subsection 104.05 on page 30 and substitute the following:

The Contractor shall also furnish the Engineer a certified letter stating that the area of disposal is not in a wetland or in Waters of the U.S.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-105-8

CODE: (SP)

DATE: 11/20/2014

SUBJECT: Control of Work

Section 105, Control of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is modified as follows.

907-105.04--Coordination of Plans, Specifications, Interim Specifications, Special Provisions and Notice to Bidders. Delete the second full paragraph of Subsection 105.04 on page 35, and substitute the following.

In case of a conflict between plan quantities, advertisement quantities, and/or bid sheet quantities, the bid sheet quantities shall prevail.

907-105.05--Cooperation by Contractor. Delete Subsection 105.05 on page 35 and substitute the following.

907-105.05--Cooperation by Contractor. The Contractor shall give the work the attention necessary to expedite its progress, and shall cooperate with the Engineer, inspectors and other Contractors in every possible way.

907-105.05.1--Project Superintendent. The Contractor shall have a competent and experienced full time resident superintendent who is capable of reading and understanding the plans and specifications for the particular work being performed. The superintendent shall be on the project site at any time work is being performed by the Prime Contractor or any Subcontractors. The superintendent shall advise the Project Engineer of an intended absence from the work and designate a person to be in charge of the work during such absence. The superintendent shall receive instructions from the Engineer or authorized representative. Upon issuance of the Notice to Award, the Contractor or duly appointed agent authorized to bind the Contractor shall file with the Executive Director the name and address of the superintendent who will supervise the work with copies to the Construction Engineer, Contract Administration Engineer, District Engineer and Project Engineer. The Executive Director shall be immediately notified in writing with copies to those stated when a change is made in the Contractor's superintendent or superintendent's address. The superintendent shall have full authority to execute orders or directives of the Engineer without delay and to promptly supply materials, equipment, labor and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet.

907-105.05.2--Certified Erosion Control Person. On projects that require an erosion control plan, the Contractor shall also designate a responsible person whose primary duty shall be to monitor and maintain the effectiveness of the erosion control plan, including NPDES permit

requirements. This responsible person must be a Certified Erosion Control Person certified by an organization approved by the Department. Prior to or at the pre-construction conference, the Contractor shall designate in writing the Certified Erosion Control Person to the Project Engineer. The designated Certified Erosion Control Person shall be assigned to only one (1) project. When special conditions exist, such as two (2) adjoining projects or two (2) projects in close proximity, the Contractor may request in writing that the State Construction Engineer approve the use of one (1) Certified Erosion Control Person for both projects. The Contractor may request in writing that the Engineer authorize a substitute Certified Erosion Control Person to act in the absence of the Certified Erosion Control Person. The substitute Certified Erosion Control Person must also be certified by an organization approved by the Department. A copy of the Certified Erosion Control Person's certification must be included in the Contractor's Protection Plan as outlined in Subsection 907-107.22.1. This in no way modifies the requirements regarding the assignment and availability of the superintendent.

907-105.14--Maintenance During Construction. Before the first sentence Subsection 105.14 on page 39, add the following.

The Contractor will be responsible for the maintenance of existing roadways within the limits of this project starting on the date of the Notice To Proceed / Beginning of Contract Time. Anytime work is performed in a travel lane, the Contractor shall install portable lane closure signs meeting the requirement of the MDOT Standard Drawing or MUTCD.

907-105.16--Acceptance. Delete Subsection 105.16 on pages 40 and 41, and substitute the following.

907-105.16--Acceptance.

907-105.16.1--Partial Acceptance of a Unit. When the Contractor has completed a unit of the work such as an interchange, a structure, a portion of the road or pavement or one project of a multi-project contract, the Contractor may request the Engineer to make a final inspection of that unit; or the Executive Director may order a final inspection of the unit if it is in the public's interest. If the Engineer finds upon inspection that the unit has been completed in compliance with the contract and it is a complete facility which can be made available to the public or made available for the prosecution of work under another contract, the Executive Director may conditionally accept the unit and conditionally relieve the Contractor of certain contractual responsibilities as defined in the release.

In the event items of work covered by such release are found to be defective or deficient as evidenced by unsatisfactory test reports of materials incorporated in the work or other engineering determination, the release shall terminate upon written notification to the Contractor. The Contractor shall make all corrections, restorations, constructions or reconstructions deemed necessary and shall resume all contractual responsibilities until all corrective measures have been made in accordance with the terms of the contract.

Partial acceptance does not constitute final acceptance of the work, or any part thereof, nor in any way void or alter any of the terms of the contract.

Relief from "certain contractual responsibilities" as indicated herein may, or may not, include:

- (a) Further maintenance of the defined limits of the partially accepted work.
- (b) Further public liability for the defined limits of the partially accepted work.
- (c) Further liability for liquidated damages as applicable to the value of the partially accepted work when the quantities for the partially accepted work are separate quantities listed on the Summary of Quantities sheet of the plans, and the separate quantities and the total amounts thereof are listed on the Engineer's Estimate. Otherwise, no reduction in liquidated damages will be made because of such partial acceptance.

Unless specifically provided in the contract, the liability for liquidated damages shall not be reduced to less than that applicable under the contract for an amount of such work equal to at least fifty percent (50%) of the total amount of work under the contract.

907-105.16.2--Partial Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection.

If the inspection discloses any work as being unsatisfactory or incomplete, the Engineer will discuss in detail with the Contractor all discrepancies in the work. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed.

However, if during the final inspection the Engineer determines that all work has been satisfactorily completed save that of growth and coverage of plant establishment on all or part of the work, the Engineer may recommend partial release of all work except items related to growth and coverage. Upon such recommendation, the Contractor will be given a partial release of maintenance and shall be released from further contractual liabilities for the completed work. The Contractor will retain responsibility for plant establishment and all maintenance and repairs appurtenant thereto until satisfactory growth and coverage is achieved.

907-105.16.3--Final Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection. If all work provided by the contract has been completed to the Engineer's satisfaction, the inspection will constitute the final inspection, and the Engineer will conditionally release the Contractor of maintenance.

As provided in the contract, in the event items of work are found to be deficient or defective as evidenced by unsatisfactory test reports of material incorporated into the work, the Contractor shall assume full responsibility for corrective measures, and shall reassume maintenance and public liability until such corrective measures are completed to the satisfaction of the Engineer.

907-105.16.4.--Final Acceptance of a Project. Upon evidence that the Contractor has fulfilled all obligations under the contract, the Executive Director will make final acceptance and notify the Contractor in writing. Final acceptance of the project will not be given until all obligations imposed under the contract, including but not limited to the final reporting of payrolls, final reporting of DBE payments, acceptable certifications and test reports of materials used, etc., have been fulfilled.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-107-13

DATE: 11/17/2015

SUBJECT: Permits, Licenses and Taxes

After the second paragraph of Subsection 907-107.02 on page 1, add the following.

Prior to commencing work on any Project, the Contractor shall obtain a Material Purchase Certificate number (MPC#) from the Mississippi Department of Revenue, pursuant to Miss. Code Ann. § 27-65-21, and Miss. Admin. Code 35.IV.10.01. Upon receipt of the MPC#, the Contractor must immediately provide the MPC# to the Contract Administration Division of the Department. Failure to obtain and submit a MPC# prior to commencing work shall result in the withholding of payment to the Contractor until such time that a MPC# is obtained and submitted to the Department.

Delete the last sentence of the last paragraph of Subsection 907-107.02 on page 1, and substitute the following.

The Department will notify the Mississippi Department of Revenue of the names and addresses of any Contractors or Subcontractors.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-107-13

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Legal Relations and Responsibility to Public

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-107.02--Permits, Licenses and Taxes. Delete in toto Subsection 107.02 on page 49 and substitute the following.

The Contractor or any Subcontractor shall have the duty to determine any and all permits and licenses required and to procure all permits and licenses, pay all charges, fees and taxes and issue all notices necessary and incidental to the due and lawful prosecution of the work. At any time during the life of this contract, the Department may audit the Contractor's or Subcontractor's compliance with the requirements of this section.

The Contractor or any Subcontractor is advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq. and the Mississippi Use Tax Law, Section 27-67-1, et seq., and their requirements and penalties, apply to any contract or subcontract for construction, reconstruction, maintenance or repairs, for contracts or subcontracts entered into with the State of Mississippi, any political subdivision of the State of Mississippi, or any Department, Agency, Institute of the State of Mississippi or any political subdivision thereof.

The Contractor or any Subcontractor will be subject to one or more audits by the Department during the life of this contract to make certain that all applicable fuel taxes, as outlined in Section 27-55-501, et seq., and any sales and/or use taxes, as outlined in Section 27-67-1, et seq. are being paid in compliance with the law. The Department will notify the Mississippi State Tax Commission of the names and addresses of any Contractors or Subcontractors.

907-107.14--Damage Claims and Insurance.

| **907-107.14.2--Liability Insurance.** Delete Subsection 107.14.2 beginning on page 60 and substitute the following.

907-107.14.2.1--General. The Contractor shall carry Contractor's liability, including subcontractors and contractual, with limits not less than: \$500,000 each occurrence; \$1,000,000 aggregate; automobile liability - \$500,000 combined single limit - each accident; Workers' Compensation and Employers' Liability - Statutory & \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. Each policy shall be signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent of the Insurance Company.

The Contractor shall have certificates furnished to the Department from the insurance companies providing the required coverage. The certificates shall be on the form furnished by the Department and will show the types and limits of coverage.

907-107.14.2.2--Railroad Protective. The following provisions are applicable to all work performed under a contract on, over or under the rights-of-way of each railroad shown on the plans.

The Contractor shall assume all liability for any and all damages to work, employees, servants, equipment and materials caused by railroad traffic.

Prior to starting any work on railroad property, the Contractor shall furnish satisfactory evidence to the Department that insurance of the forms and amounts set out herein in paragraphs (a) and (b) has been obtained. Also, the Contractor shall furnish similar evidence to the Railroad Company that insurance has been obtained in accordance with the Standard Provisions for General Liability Policies and the Railroad Protective Liability Form as published in the Code of Federal Regulations, 23 CFR 646, Subpart A. Evidence to the Railroad Company shall be in the form of a Certificate of Insurance for coverages required in paragraph (b), and the original policy of the Railroad Protective Liability Insurance for coverage required in paragraph (a).

All insurance herein specified shall be carried until the contract is satisfactorily complete as evidenced by a release of maintenance from the Department.

The Railroad Company shall be given at least 30 days notice prior to cancellation of the Railroad Protective Liability Insurance policy.

For work within the limits set out in Subsection 107.18 and this subsection, the Contractor shall provide insurance for bodily injury liability, property damage liability and physical damage to property with coverages and limits no less than shown in paragraphs (a) and (b). Bodily injury shall mean bodily injury, sickness, or disease, including death at anytime resulting therefrom. Property damage shall mean damages because of physical injury to or destruction of property, including loss of use of any property due to such injury or destruction. Physical damage shall mean direct and accidental loss of or damage to rolling stock and their contents, mechanical construction equipment or motive power equipment.

(a) **Railroad Protective Liability Insurance** shall be purchased on behalf of the Railroad Company with limits of \$2,000,000 each occurrence; \$6,000,000 aggregate applying separately to each annual period for lines without passenger trains. If the line carries passenger train(s), railroad protective liability insurance shall be purchased on behalf of the Railroad Company with limits of \$5,000,000 each occurrence; \$10,000,000 aggregate applying separately to each annual period.

Coverage shall be limited to damage suffered by the railroad on account of occurrences arising out of the work of the Contractor on or about the railroad right-of-way, independent of the railroad's general supervision or control, except as noted in paragraph 4 below.

Coverage shall include:

- (1) death of or bodily injury to passengers of the railroad and employees of the railroad not covered by State workmen's compensation laws,
- (2) personal property owned by or in the care, custody or control of the railroads,
- (3) the Contractor, or any of the Contractor's agents or employees who suffer bodily injury or death as a result of acts of the railroad or its agents, regardless of the negligence of the railroads, and
- (4) negligence of only the following classes of railroad employees:
 - (i) any supervisory employee of the railroad at the job site
 - (ii) any employee of the railroad while operating, attached to, or engaged on, work trains or other railroad equipment at the job site which are assigned exclusively to the Contractor, or
 - (iii) any employee of the railroad not within (i) or (ii) above who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or Governmental authority.

(b) **Contractor's Liability - Railroad**, including subcontractors, XCU and railroad contractual with limits of \$1,000,000 each occurrence; \$2,000,000 aggregate. **Automobile** with limits of \$1,000,000 combined single limit any one accident; **Workers' Compensation and Employer's Liability** - statutory and \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. **Excess/Umbrella Liability** \$5,000,000 each occurrence; \$5,000,000 aggregate. All coverage to be issued in the name of the Contractor shall be so written as to furnish protection to the Contractor respecting the Contractor's operations in performing work covered by the contract. Coverage shall include protection from damages arising out of bodily injury or death and damage or destruction of property which may be suffered by persons other than the Contractor's own employees.

In addition, the Contractor shall provide for and on behalf of each subcontractor by means of a separate and individual liability and property damage policy to cover like liability imposed upon the subcontractor as a result of the subcontractor's operations in the same amounts as contained above; or, in the alternative each subcontractor shall provide same.

907-107.15--Third Party Beneficiary Clause. In the first sentence of the first paragraph of Subsection 107.15 on page 61, change "create the public" to "create in the public".

907-107.17--Contractor's Responsibility for Work. Delete the fifth sentence of the fifth paragraph of Subsection 107.17 on page 63 and substitute the following.

The eligible permanent items shall be limited to traffic signal systems, changeable message signs, roadway signs and sign supports, lighting items, guard rail items, delineators, impact

attenuators, median barriers, bridge railing or pavement markings. The eligible temporary items shall be limited to changeable message signs, guard rail items, or median barriers.

907-107.18--Contractor's Responsibility for Utility Property and Services. After the first sentence of Subsection 107.18 on page 63, add the following:

Prior to any excavation on the project, the Contractor shall contact MS 811 and advise them to mark all known utilities in the area of the excavation.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-108-37LPA

DATE: 12/17/2015

SUBJECT: Prosecution and Progress

Delete the first paragraph of Subsection 907-108.03.1 on pages 1 and 2, and substitute the following.

907-108.03.1--Progress Schedule. On working day projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract.

On completion date projects **which include A + B projects**, the Contractor shall furnish a progress schedule and be prepared to discuss both its proposed methodologies for fulfilling the scheduling requirements and its sequence of operations.

The Engineer will review Contractor prepared progress schedules and approve schedules as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer prior to commencing work. The progress schedule shall be a computer generated bar-chart type schedule meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-108-37LPA

CODE: (SP)

DATE: 1/7/2015

SUBJECT: Prosecution and Progress

Section 108, Prosecution and Progress, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-108.01--Subletting of Contract.

907-108.01.1--General. At the end of the last paragraph of Subsection 108.01.1 on page 73, add the following.

The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to make prompt payment within 15 calendar days as required above, or failure to submit the required OCR-484-LPA Form, Certification of Payments to Subcontractors, which is also designed to comply with prompt payment requirements.

907-108.02--Notice To Proceed. Delete the second paragraph of Subsection 108.02 on page 75.

Delete the fourth paragraph of Subsection 108.02 on page 75 and substitute the following.

Upon written request from the Contractor and if circumstances permit, the Notice to Proceed may be issued at an earlier date subject to the conditions stated therein. The Contractor shall not be entitled to any monetary damages or extension of contract time for any delay claim or claim of inefficiency occurring between the early issuance Notice to Proceed date and the Notice to Proceed date stated in the contract.

907-108.03--Prosecution and Progress. Delete Subsection 108.03.1 on pages 75 & 76, and substitute the following.

907-108.03.1--Progress Schedule. On working day projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract. The Engineer will review the schedule and approve the schedule as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer and MDOT LPA Coordinator prior to commencing work. The progress schedule shall be a bar-chart type schedule submitted on 11"x17" paper meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

When preparing the progress schedule, the Contractor shall include the following:

- Show a time scale to graphically show the completion of the work within contract time.
- Define and relate activities to the contract pay items.
- Show all activities in the order the work is to be performed including submittals, submittal reviews, fabrication and delivery.
- Show all activities that are controlling factors in the completion of the work.
- Show the time needed to perform each activity and its relationship in time to other activities.

This progress schedule shall provide a bar for each major phase of construction such as, but not limited to, clearing and grubbing, grading, drainage structures, bridges, base, shoulders, paving, etc. with an estimated start working day and completion working day for each bar, all within the specified contract time.

A revised progress schedule may be required within ten days of the occurrence of any one of the following conditions:

- when a major change occurs in the work
- when a time extension is granted
- when the progress schedule becomes unrealistic

The Engineer's approval of the aforementioned Progress Schedules does not waive any contract requirements.

In the event the Contractor has not submitted an approvable progress schedule by the beginning of contract time, the progress schedule prepared by the LPA shall be the approved progress schedule and used to assess contract time.

An approved progress schedule shall be in effect until the date on which a revised schedule is approved. The approved progress schedule will be the basis for contract time assessment.

When a Critical Path Method (CPM) schedule is required in the proposal, this schedule will be used in lieu of the bar graph progress schedule in evaluating work progress. In such case, the same time frame noted in this subsection for the original submittal along with the update requirements will apply.

907-108.03.2--Preconstruction Conference. Delete the first paragraph of Subsection 108.03.2 on page 76 and substitute the following.

Prior to commencement of the work, a preconstruction conference shall be held for the purpose of discussing with the Contractor essential matters pertaining to the prosecution and satisfactory completion of the work. The Contractor will be responsible for scheduling the preconstruction conference. The Contractor will advise the Project Engineer in writing 14 days prior to the requested date that a conference is requested. The preconstruction conference will be coordinated through the MDOT LPA Coordinator to insure that the proper MDOT representatives are in

attendance. When the contract requires the Contractor to have a certified erosion control person, the Contractor's certified erosion control person shall be at the preconstruction conference. The local public agency will arrange for utility representatives and other affected parties to be present.

Delete the third paragraph of Subsection 108.03.2 on page 76.

907-108.06--Determination and Extension of Contract Time. Delete Subsections 108.06.1 and 108.06.2 on pages 79 thru 85 and substitute the following.

907-108.06.1--Based on [Working Day](#) Completion.

907-108.06.1.1--General. Contract Time will be established on the basis of [an allowable number of Working Days](#), as indicated in the contract. [A working day is defined as a day the Contractor worked or could have worked in accordance with the conditions set forth in Subsection 907-108.06.1.2, Subparagraphs \(a\) and \(b\), except during the months of December, January, and February.](#)

[During the months of December, January, and February, time will be assessed in the miscellaneous phase regardless of whether or not the Contractor actually works. The value for the time on any particular day will be determined by dividing the number of anticipated working day shown in the following table by the number of days in the particular month. This number will be expressed to three decimal places \(0.000\)](#)

The span of time allowed for the completion of the work included in the contract will be indicated in the contract documents and will be known as "Contract Time".

907-108.06.1.2--Contract Time. The following TABLE OF ANTICIPATED [WORKING DAYS](#) indicates an average/anticipated number of [working](#) days per month.

TABLE OF ANTICIPATED **WORKING** DAYS

Month	WORKING Days
January	6
February	7
March	11
April	15
May	19
June	20
July	21
August	21
September	20
October	16
November	11
December	5
Calendar Year	172

NOTE: The above Table is for informational purposes only. The actual working day total as assessed by the Project Engineer on Form CSD-765 shall govern.

Available **working** days will start being assessed at the original Notice to Proceed/Beginning of Contract Time date set in accordance with the contract, regardless of whether or not the Contractor has been issued an early Notice to Proceed.

Available **working** days will be based on soil and weather conditions and other specific conditions cited in the contract. The Engineer will determine on each applicable day the extent to which work in progress could have been productive, regardless of whether the Contractor actually worked.

An available **working** day will be assessed as follows:

(a) Any day of the week, Monday through Friday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works or could have worked for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works or could work four but less than six consecutive hours, one-half (0.5) of an available work day will be charged for that day. When the Contractor works or could work six or more consecutive hours during the day, one (1.0) available work day will be charged for that day, **and**

(b) Any Saturday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works less than four consecutive hours during the day, no time will be charged for that day. When the Contractor works four but less than six consecutive hours,

one-half (0.5) of an available work day will be charged for that day. When the Contractor works six or more consecutive hours during the day, one (1.0) available work day will be charged for that day.

Should the weather or other conditions be such that four (4) consecutive satisfactory hours are not available prior to noon (for daytime operations) or midnight (for nighttime operations), no time will be assessed for that day regardless of the above conditions. However, if the Contractor elects to work, time will be assessed in accordance with the previous paragraphs.

Time will not be charged during any required waiting period for placement of permanent pavement markings as set forth in Subsection 618.03 provided all other work is complete except growth and coverage of vegetative items as provided in Subsection 210.01.

Each month the Engineer will complete, and furnish to the Contractor, an "Assessment Report of Working Days" (CSD-765). This report shows the number of working days assessed during the estimate period and the cumulative working days assessed to date. The Contractor should review the Engineer's report as to the accuracy of the assessment and confer with the Resident or Project Engineer to rectify any differences. Each should make a record of the differences, if any, and conclusions reached. In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 15 calendar days following the ending date of the monthly report in question to file a protest Notice of Claim in accordance with the provisions of Subsection 105.17. Otherwise, the Engineer's assessment shall be final unless mathematical errors of assessment are subsequently found to exist, and any claim of the Contractor as to such matter shall be waived.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage of time elapsed will be determined by comparing the working days assessed to-date on Form CSD-765 to the total allowable working days for the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.1.3--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

An extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes, named tropical storms,

tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Working Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be on a working day basis.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

If the **contract time** of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the **working days are exhausted**, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.1.4--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges **for the remaining working days** will resume. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.06.2--Based on Specified Completion Date.

907-108.06.2.1--General. Contract Time will be established on the basis of a Specified Completion Date indicated in the Contract, or as determined by the Contractor in accordance with the contract documents. The span of time allowed for the completion of the work included in the contract will be known as "Contract Time".

For contracts in which a Specified Completion Date is indicated in the Contract, the span of Contract Time shall be the number of Calendar Days specified in the Contract.

For contracts in which a Completion Date is determined by the Contractor (A + B Contracts), the span of Contract Time shall be between the date of the Notice to Proceed and the date representing the number of Calendar Days determined by the Contractor to complete the work.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

At any given date, the ratio of the accumulated monetary value of that part of the work actually accomplished to the total contract bid amount adjusted to reflect approved increases or decreases shall determine the "percent complete" of the work.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage elapsed time shall be calculated as a direct ratio of the expired Calendar Days to the total Calendar Days provided for in the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.2.2--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

On all completion date contracts, an extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes,

named tropical storms, tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Calendar Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be based on a calendar day basis, excluding Saturdays, Sundays or legal holidays recognized by the Department in Subsection 108.04.1.

If the contract time of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the specified completion date, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.2.3--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges will resume. If the specified completion date had not been reached at the time the Contractor called for a final inspection, the calendar day difference between the specified completion date and the date the Contractor called for a final inspection will be added after the 14-day period before starting liquidation damages. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.07--Failure to Complete the Work on Time. Delete the Schedule of Deductions table in Subsection 108.07 on page 85, and substitute the following.

Schedule of Deductions for Each Day of Overrun in Contract Time

Original Contract Amount		Daily Charge Per Calendar Day
From More Than	To and Including	
\$ 0	100,000	\$ 150
100,000	500,000	360
500,000	1,000,000	540
1,000,000	5,000,000	830
5,000,000	10,000,000	1,200
10,000,000	20,000,000	1,800
20,000,000	-----	3,500

907-108.10--Termination of Contractor's Responsibility. In the last sentence of Subsection 108.10 on page 88, change “bond” to “performance and payment bond(s)”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-109-8

CODE: (SP)

| DATE: 09/10/2015

SUBJECT: Measurement and Payment

Section 109, Measurement and Payment, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-109.01--Measurement of Quantities. Delete the third full paragraph of Subsection 109.01 on page 90 and substitute the following.

When requested by the Contractor, material specified to be measured by the cubic yard or ton may be converted to the other measure as appropriate. Factors for this conversion will be determined by the District Materials Engineer and agreed to by the Contractor. The conversion of the materials along with the conversion factor will be incorporated into the contract by supplemental agreement. The supplemental agreement must be executed before such method of measurement is used.

After the second sentence of the fourth full paragraph of Subsection 109.01 on page 90, add the following.

Where loose vehicle measurement (LVM) is used, the capacity will be computed to the nearest one-tenth cubic yard and paid to the whole cubic yard. Measurements greater than or equal to nine-tenths of a cubic yard will be rounded to the next highest number. Measurements less than nine-tenths of a cubic yard will not be rounded to the next highest number. Example: A vehicle measurement of 9.9 cubic yards will be classified as a 10-cubic yard vehicle. A vehicle measurement of 9.8 cubic yards will be classified as a 9-cubic yard vehicle.

907-109.04--Extra and Force Account Work. Delete the first paragraph under Subsection 109.04 on page 91, and substitute the following.

When extra work results for any reason and is not handled as prescribed elsewhere herein, the Engineer and the Contractor will attempt to agree on equitable prices. When such prices are agreed upon, a Supplemental Agreement will be issued by the Engineer.

When the Supplemental Agreement process is initiated, the Contractor will be required to submit to the Engineer a detailed breakdown for Material, Labor, Equipment, Profit and Overhead. The total allowable markup (which includes Prime Contractor and Subcontractor work, if applicable) for Supplemental Agreement work shall not exceed 20%, which also includes tax and bond.

The requirement for detailed cost breakdowns may be waived when a Department's Bid Item History exists for the proposed item(s), and the Contractor's requested price, including mark-up, is within 20% of the Department's Bid History cost for that item(s). In any case, the Department reserves the right to request detailed cost breakdowns from the Contractor on any Supplemental Agreement request.

When equitable prices cannot be agreed upon mutually by the Engineer and the Contractor, the Engineer will issue a written order that work will be completed on a force account basis to be compensated in the following manner:

In the last sentence of subparagraph (b) in Subsection 109.04 on page 91, change "bond" to "bond(s)".

Delete the first and second paragraphs of subparagraph (d) in Subsection 109.04 on page 92 and substitute the following.

Equipment. For any machinery or special equipment, other than small tools, authorized by the Engineer, the Contractor will use the rates shown in the book entitled "Rental Rate Blue Book For Construction Equipment" as published by EquipmentWatch® and is current at the time the force account work is authorized, unless otherwise allowed by the Engineer. This book shall be used to determine equipment ownership and operating expense rates. These rates do not include allowances for operating labor, mobilization or demobilization costs, overhead or profit, and do not represent rental charges for those in the business of renting equipment. Operating labor and overhead cost will be allowed. Subject to advance approval of the Engineer, actual transportation cost for a distance of not more than 200 miles will be reimbursed for equipment not already on the project. The cost of transportation after completion of the force account work will be reimbursed except it cannot exceed the allowance for moving the equipment to the work.

907-109.06--Partial Payment.

907-109.06.1--General. Delete the fourth and fifth sentences of the third paragraph of Subsection 109.06.1 on page 94, and substitute the following.

In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 25 calendar days following the Contractor's receipt of the monthly estimate in question to file in writing, a protest Notice of Claim in accordance with the provisions Subsection 105.17. Otherwise, the Engineer's estimated quantities shall be considered acceptable pending any changes made during the checking of final quantities.

907-109.06.2--Advancement on Materials. Delete Subsection 109.06.2 on pages 94 & 95, and substitute the following.

907-109.06.2--Advancement on Materials. Partial payments may include advance payment for certain nonperishable or durable materials such as base aggregates, reinforcing steel, bridge piling, structural steel, prefabricated bridge components, traffic signal equipment, electrical equipment, fencing materials, and sign materials with approval of the Engineer. Advance payment may be requested for structural steel members provided fabrication has been completed and the members have been declared satisfactory for storage by a Department representative. The Contractor must make a written request to the Project Engineer for advanced payment and furnish written consent of the Surety. To qualify for advance payment, materials must be stored or stockpiled on or near the project or at other locations approved by the Engineer; or in the case of precast concrete members, treated timber, guard posts and other approved preprocessed durable and bulky materials, the materials may be stored at the commercial producer's yard provided it is located in Mississippi; or in the case of prestressed concrete members that may

require being produced at an out-of-state location, the prestress members shall be produced and may be stored at the commercial manufacturer's yard provided it is a PCI certified plant on the Department's List of Approved Prestress & Precast Plants and it is located within the continental United States; or in the case of structural steel members that may require fabrication at an out-of-state location, the fabricated members may be stored at the location of the commercial fabricator's yard provided it is located within the continental United States.

Advancements will not be allowed until the Project Engineer has received copies of material invoices and certified test reports or acceptable certificates of conformance, and in the case of materials stored at the commercial producer's/fabricator's yard, the material shall be positively identified for the specific project and a Certificate of Storage issued by the Department or a designated representative of the Department. Requests for advancements on fabricated structural steel members and prestress concrete members stored out-of-state will be denied when the Department does not have available a designated representative to issue a Certificate of Storage.

The Contractor shall make suitable arrangements to the satisfaction of the Engineer for storage and protection at approved sites or, in the case of materials stored at the commercial producer's yard located in Mississippi or, in the case of fabricated structural steel members stored at the commercial fabricator's yard or prestress concrete members stored at a commercial manufacturer's yard located within the continental United States, the Contractor shall make arrangements with the producer/fabricator for suitable storage and protection. If advanced payment is allowed and the materials are damaged, lost, destroyed or for any reason become unacceptable, the previous payments will be deducted from subsequent estimates until the materials are replaced or restored to an acceptable condition. In all cases, the Contractor shall save harmless the Commission in the event of loss or damage, regardless of cause.

An invoice or an accumulation of invoices for each eligible material must total \$10,000 or more before consideration will be given for making advanced payment. When allowed, advance payment will be based on verified actual material cost plus transportation charges to the point of storage. Sales tax, local haul and handling costs shall not be included as material cost.

Advanced payment shall not exceed 100% of the invoice price or 75% of the total contract bid price for the pay item, whichever is less.

Advanced payment for a component of a pay item shall not exceed 95% of the invoice price or 75% of the total contract bid price for the pay item of which the material is a part, whichever is less.

Advanced payment will be made only on materials that will be incorporated permanently in the project.

No advanced payment will be made on minor material items, hardware, etc.

No advanced payment will be made for materials when it is anticipated that those materials will be incorporated into the project within 60 calendar days.

Advanced payment will be paid for those materials which are not readily available, and which can be easily identified and secured for a specific project and for which lengthy stockpiling periods would not be detrimental.

Where a storage area is used for more than one project, material for each project shall be segregated from material for other projects, identified, and secured. Adequate access for auditing shall be provided. All units shall be stored in a manner so that they are clearly visible for counting and/or inspection of the individual units.

Unless specifically provided for in the contract, advance payment will not be made on materials, except for fabricated structural steel members or prestress concrete members, stored or stockpiled outside of the State of Mississippi.

Materials for which an advanced payment has been allowed must be paid for by the Contractor within 60 days of the estimate on which the advanced payment was first allowed and proof of said payment must be verified by the supplier. If proof of payment is not furnished within the allowable 60 days, the advanced payment will be deducted on subsequent current estimates until such time proof of payment is furnished.

As the materials are incorporated into the work, proportionate reductions for advance payments shall be made from monthly estimates covering the work performed. Calculation of percentage of completion, or rate of progress, shall be based on completed work and no consideration will be given to stockpiled materials.

907-109.07--Changes in Material Costs. Delete the third full paragraph of Subsection 109.07 on page 96 and substitute the following.

A link to the established base prices for bituminous products and fuels will be included in the contract documents under a Notice to Bidders entitled "Petroleum Products Base Prices."

Delete the last paragraph of Subsection 109.07 on pages 97 & 98, and substitute the following.

Adjustments herein provided shall not apply to fuels consumed or materials incorporated into the work during any monthly estimate period falling wholly after the expiration of contract time as defined in Subsection 101.02 of the applicable Mississippi Standard Specifications for Road and Bridge Construction, and as determined by checked final quantities.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-110-2

CODE: (SP)

| DATE: 04/02/2010

SUBJECT: Wage Rates

Section 110, Required Contract Provisions, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-110.02--Application. Delete Subsection 110.02.2 on page 100 and substitute the following.

907-110.02.2--Wage Rates. All persons employed or working upon the site of the work will be paid at wage rates not less than those contained in the wage determination decision of the Secretary of Labor in effect 10 days prior to taking bids.

| Bidders are advised that regardless of the wage rates listed in the Supplement to FHWA 1273 in the contract, minimum federal wage rates must be paid.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-213-2

CODE: (IS)

| DATE: 01/25/2008

SUBJECT: Agricultural Limestone

Section 907-213, Fertilizing, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-213.05--Basis of Payment. Delete the first sentence of the first paragraph of Subsection 213.05 on page 136 and add the following as the first paragraph of this subsection.

| Hard rock agricultural limestone will be paid for at the contract unit price per ton. Hard rock agricultural limestone with a relative neutralizing value (RNV), determined in accordance with Subsection 907-715-02.2.1.3, of between 60.0% and 62.9% will be paid for at half (½) the contract unit price per ton. No payment will be made for hard rock agricultural limestone with an RNV less than 60.0%.

Delete the first pay item listed on page 137 and substitute the following:

907-213-A: Agricultural Limestone

- per ton

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-216-1

CODE: (IS)

DATE: 05/22/2013

SUBJECT: Solid Sodding

Section 216, Solid Sodding, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-216.04--Method of Measurement. Delete the third and fourth paragraphs of Subsection 216.04 on page 144.

907-216.05--Basis of Payment. Delete the first paragraph of Subsection 216.05 on pages 144 and 145, and substitute the following.

Solid sodding will be paid for at the contract unit price per square yard, which price shall be full compensation for all labor, equipment, materials, tools, ground preparation, fertilization, and all incidentals necessary to complete the work.

Add the "907" prefix to the pay items listed on page 145.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-237-4

CODE: (SP)

| DATE: 03/13/2012

SUBJECT: Wattles

Section 907-237, Wattles, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-237 - WATTLES

907-237.01--Description. This work consists of furnishing, constructing and maintaining wattles for the retention of soil around inlets, swale areas, small ditches, sediment basins and other areas as necessary. Also, the work includes removing and disposing of the wattles and silt accumulations.

Measurement and payment for wattles will be made only when a pay item is included in the bid schedule of the proposal. The quantity is estimated for bidding purposes only and will be dependent upon actual conditions which occur during construction of the project.

| **907-237.02--Materials.** Wattles used around inlets shall have a diameter of twelve inches (12") and a length adequate to meet field conditions. Wattles used at other locations shall have a diameter of twenty inches (20") and a length adequate to meet field conditions. The minimum diameter for the above wattle sizes shall be one inch (1") less than the specified diameter.

The stakes used in securing the wattles in place shall be placed approximately three feet (3') apart throughout the length of the wattle. Stakes shall be wooden and of adequate size to stabilize the wattles to the satisfaction of the Engineer.

In addition to the requirements of this specifications, wattles shall be listed on the Department's "Approved Sources of Materials".

907-237.03--Construction Requirements.

907-237.03.1--General. The wattles shall be constructed at the locations and according to the requirements shown on the erosion control plan.

907-237.03.2--Maintenance and Removal. The Contractor shall maintain the wattles and remove and dispose of silt accumulations.

When the wattles are no longer needed, they shall be removed and the Contractor shall dispose of silt accumulations and treat the disturbed areas in accordance with the contract requirements.

907-237.04--Method of Measurement. Wattles of the size specified will be measured per linear foot.

907-237.05--Basis of Payment. Wattles, measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for installation, maintaining and removal of the wattles, the removal and disposal of silt accumulations and any required restoration of the disturbed areas.

Payment will be made under:

907-237-A: Wattles, Size

- per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-246-3

CODE: (SP)

DATE: 11/08/2010

SUBJECT: Sandbags and Rockbags

Section 907-246, Sandbags and Rockbags, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-246 -- SANDBAGS AND ROCKBAGS

907-246.01--Description. This item of work shall consist of the furnishing, installing, and maintaining sandbags and rockbags for the purpose of temporary erosion control by intercepting and slowing the flow of sediment-laden runoff water, or for use as a temporary dam.

907-246.02--Materials. The filler material for sandbags shall consist of a fine aggregate meeting the requirements of Subsection 703.02. The filler material for rockbags shall consist of a size 57 aggregate meeting the requirements of Subsection 703.03.

The bag material shall be woven polypropylene, polyethylene or polyamide fabric with a minimum unit weight of four (4) ounces per square yard. The bags shall be a minimum of 21 inches in length, 12 inches in width, and four (4) in thickness when filled.

907-246.03--Construction Requirements. Sandbags and rockbags shall be used to construct a berm/dam which will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Sand or rock shall be placed in the bag so that at least the top six (6) inches of the bag is unfilled to allow for proper tying of the open end. Any subsequent rows of bags shall be offset one-half the length of the preceding row to provide a layered brick-type arrangement.

The sandbag and rockbag berm/dam installation shall be maintained in good condition by the Contractor. All necessary work and materials to maintain the integrity of the installation shall be provided until earthwork construction is complete and permanent erosion-control features are in place. The maintenance of the bags will not be paid for separately and will be included in the cost for sandbags or rockbags.

907-246.04--Method of Measurement. Sandbags and rockbags will be measured per linear foot or each.

Sandbags and rockbags measured by the linear foot shall be in accordance with the details in the erosion control drawing. The length of the sandbag or rockbag berm/dam will be measured end-to-end along the cross-section of the ditch in accordance with the erosion control drawing.

907-246.05--Basic of Payment. Sandbags and rockbags, measured as prescribed above, will be

paid for per linear foot or each, which prices shall be full compensation for furnishing bags, fine aggregate, size 57 aggregate, placement of bags, maintenance of the installation, removal and disposal of the sediment deposits and removal after construction has been completed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

907-246-A: Sandbags - per linear foot or each

907-246-B: Rockbags - per linear foot or each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-601-1

CODE: (IS)

DATE: 08/29/2007

SUBJECT: Structural Concrete

Division 600, Incidental Construction, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the heading **DIVISION 600 - INCIDENTAL CONSTRUCTION**, add the following:

Unless otherwise specified, all testing of Portland cement concrete in Division 600 shall be in accordance with the requirements of Subsection 907-601.02.1.

907-601.02--Materials.

907-601.02.1--General. Delete the second and third sentence of the first paragraph of Subsection 601.02.1 on page 348, and substitute the following:

Sampling and testing will be in accordance with TMD-20-04-00-000 or TMD-20-05-00-000, as applicable.

907-601.03.6.3--Removal of Falsework, Forms, and Housing. Delete the first paragraph, the table and second paragraph of Subsection 601.03.6.3 on pages 349 and 350, and substitute the following:

The removal of falsework, forms, and the discontinuance of heating, shall be in accordance with the provisions and requirements of Subsection 907-804.03.15, except that the concrete shall conform to the following compressive strength requirements:

Wingwall and Wall Forms not Under Stress	1000 psi
Wall Forms under Stress	2200 psi
Backfill and Cover clear	2400 psi

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Subsection 907-804.03.15. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of Subsection 907-804.03.15. Technicians using the maturity meter or calculating strength/maturity graphs shall meet the requirements of Subsection 907-804.03.15.

907-601.05--Basis of Payment. Add the “907” prefix to the pay items listed on page 352.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-603-8

CODE: (SP)

DATE: 05/12/2008

SUBJECT: Culverts and Storm Drains

Section 603, Culverts and Storm Drains, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-603.03--Construction Requirements.

907-603.03.2--Bedding. After the first paragraph of the Subsection 603.03.2 on page 356, add the following:

Non-rigid pipe used in cross drains and storm drains shall have a Class B bedding. Non-rigid pipe used in side drains shall have a Class C bedding. No separate measurement will be made for pipe bedding. Costs associated with pipe bedding shall be included in the cost of the pipe.

907-603.03.4--Joining Conduit.

907-603.03.4.1--Storm Drainage. Delete the first sentence of the seventh paragraph of Subsection 603.03.4.1 on page 358, and substitute the following:

Flexible steel conduits shall be firmly joined by coupling bands.

907-603.03.7--Backfilling. After the first paragraph of the Subsection 603.03.7 on page 360, add the following:

Backfill of non-rigid corrugated polyethylene and poly (vinyl chloride) (PVC) pipe used in cross drains and storm drains shall be performed using one of the following methods:

1. Flowable fill meeting the requirements of Section 631 of the Standard Specifications. If flowable fill is used, care shall be taken to prevent the pipe from “floating”.
2. Crushed stone aggregate meeting the requirements of Subsection 703.04.3 of the Standard Specification.

No separate measurement will be made for backfilling pipe. Costs associated with backfilling pipe will be included in the cost of the pipe.

907-603.05--Basis of Payment. Add the “907” prefix to pay item nos. 603-ALT, 603-MA thru 603-MH, 603-NA thru 603-NL, 603-PE, and 603-PVC on pages 364 thru 366.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-618-13

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Temporary Construction Signs

Section 618, Maintenance of Traffic and Traffic Control Plan, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-618.03--Construction Requirements.

907-618.03.2--Barricades, Signs, and Flaggers. Delete the second paragraph of Subsection 618.03.2 on page 414, and substitute the following.

Flaggers shall be stationed at such points as may be deemed necessary.

Temporary construction signs shall be removed as their use becomes inapplicable. However, placing temporary signs and their supports flat on the ground outside the shoulder break line will be allowed.

907-618.05--Basis of Payment. Delete the first two pay items listed on page 418, and substitute the following.

907-618-A: Maintenance of Traffic - lump sum

907-618-B: Additional Construction Signs - per square foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-626-25

CODE: (IS)

DATE: 11/13/2012

SUBJECT: Thermoplastic Traffic Markings

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-626.01--Description. After the last sentence of the first paragraph of Subsection 626.01 on page 443, add the following.

All pavement marking material, excluding edge lines over rumble strips, shall be applied using the extrusion/ribbon method. Edge lines placed over rumble strips shall be applied using the atomization/spray method.

907-626.03.1.1--Equipment. After the second paragraph of Subsection 626.03.1.1 on page 444, add the following.

When edge lines are placed over rumble strips, the equipment must be able to apply the marking material using the atomization/spray method instead of extrusion/ribbon method.

907-626.03.1.2--Construction Details. Delete the second sentence of the first full paragraph of Subsection 626.03.1.2 on page 445, and substitute the following.

Unless otherwise specified in the plans or contract documents, the thickness shall be 90 mils for edge lines, center lines, lane lines, barrier lines and detail stripe including gore markings, and 120 mils for crosswalks, stop lines, and railroad, word and symbol markings.

After the last sentence of the third full paragraph of Subsection 626.03.1.2 on page 445, add the following.

When double drop thermoplastic stripe is called for in the contract, additional beads by the drop-on method shall be applied as follows.

Class A glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.
Class B glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.

The Class B glass beads shall be applied to the newly placed stripe first, followed by the application of the Class A glass beads.

907-626.05--Basis of Payment. Delete the pay items listed on page 446 and substitute the following.

907-626-A: 6" Thermoplastic* Traffic Stripe, Skip White	- per linear foot or mile
907-626-B: 6" Thermoplastic* Traffic Stripe, Continuous White	- per linear foot or mile
907-626-C: 6" Thermoplastic* Edge Stripe, Continuous White	- per linear foot or mile
907-626-D: 6" Thermoplastic* Traffic Stripe, Skip Yellow	- per linear foot or mile
907-626-E: 6" Thermoplastic* Traffic Stripe, Continuous Yellow	- per linear foot or mile
907-626-F: 6" Thermoplastic* Edge Stripe, Continuous Yellow	- per linear foot or mile
907-626-G: Thermoplastic* Detail Stripe, <u>Color</u>	- per linear foot
907-626-H: Thermoplastic* Legend, White	- per linear foot or square foot

* Indicate Double Drop if applicable

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-701-5

DATE: 09/17/2014

SUBJECT: Hydraulic Cement

In the last paragraph of Subsection 907-701.04.1.1 on page 3, change “AASHTO Designation: M 240, Table 3” to “AASHTO Designation: M 240, Table 4”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-701-5

CODE: (SP)

| DATE: 08/20/2014

SUBJECT: Hydraulic Cement

Section 701, Hydraulic Cement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete Subsection 701.01 on pages 595 & 596, and substitute the following:

907-701.01--General. The following requirements shall be applicable to hydraulic cement:

Only hydraulic cements conforming to Section 701 shall be used. Hydraulic cements shall not be listed or designated as meeting more than one AASHTO or Department type.

Different brands of hydraulic cement, or the same brand of hydraulic cement from different mills, shall not be mixed or used alternately in any one class of construction or structure, without written permission from the Engineer; except that this requirement will not be applicable to hydraulic cement treatment of design soils, or bases.

The Contractor shall provide suitable means for storing and protecting the hydraulic cement against dampness. Hydraulic cement, which for any reason, has become partially set or which contains lumps of caked hydraulic cement will be rejected. Hydraulic cement salvaged from discarded or used bags shall not be used.

The temperature of bulk hydraulic cement shall not be greater than 165°F at the time of incorporation in the mix.

Acceptance of hydraulic cement will be based on the certification program as described in the Department's Materials Division Inspection, Testing, and Certification Manual and job control sampling and testing as established by Department SOP.

Retests of hydraulic cement may be made for soundness and expansion within 28 days of test failure and, if the hydraulic cement passes, it may be accepted. Hydraulic cement shall not be rejected due to failure to meet the fineness requirements if upon retests after drying at 212°F for one hour, it meets such requirements.

Delete Subsection 701.02 on page 596, and substitute the following:

907-701.02--Portland Cement.

907-701.02.1--General.

907-701.02.1.1--Types of Portland Cement. Portland cement (cement) shall be either Type I or Type II conforming to AASHTO Designation: M85. Type III cement conforming to AASHTO Designation: M85 or Type III (MS), as defined by the description below Table 1, may be used for the production of precast or precast-prestressed concrete members.

907-701.02.1.2--Alkali Content. All cement types in this Subsection shall meet the Equivalent alkali content requirement for low-alkali cements listed in AASHTO Designation: M85, Table 2.

907-701.02.2--Replacement by Other Cementitious Materials. The maximum replacement of cement by weight is 25% for fly ash or 50% for ground granulated blast furnace slag (GGBFS). The minimum tolerance for replacement shall be 5% below the maximum replacement content. Replacement contents below this minimum tolerance by fly ash or GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of cement by fly ash or GGBFS.

907-701.02.2.1--Portland Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater. When portland cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash, GGBFS, or silica fume shall be as follows in Table 1.

Table 1- Cementitious Materials for Soluble Sulfate Conditions

Sulfate Exposure	Water-soluble sulfate (SO ₄) in soil, % by mass	Sulfate (SO ₄) in water, ppm	Cementitious material required*
Moderate and Seawater	0.10 - 0.20	150 - 1,500	Type II **, ***, **** cement, or Type I cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume
Severe	0.20 - 2.00	1,500 - 10,000	Type I cement with a replacement by weight of 50% GGBFS, or Type II cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume

* The values listed in this table for replacement of portland cement by the cementitious materials listed are maximums and shall not be exceeded. The

minimum tolerance for replacement shall be 0.5% below the maximum replacement content. Replacement contents below this minimum tolerance by the cementitious materials listed in this table do not meet the requirements for the exposure conditions listed and shall not be allowed.

** Type III cement conforming to AASHTO Designation: M85 with a maximum 8% tricalcium aluminate (C_3A) may be used in lieu of Type II cement as allowed in Subsection 907-701.02.1; this cement is given the designation "Type III(MS)".

*** Blended cement meeting the sulfate resistance requirements of Subsection 907-701.04 may be used in lieu of Type II as allowed in Subsection 907-701.04.

**** Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.02.2.

Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed above.

907-701.02.2.2--Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater. When portland cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 907-701.02.2.1. Silica fume shall be used to bring the cementitious materials into compliance with the requirements of Table 1.

Delete Subsection 701.03 on page 596, and substitute the following:

907-701.03--Masonry Cement. Masonry cement shall conform to ASTM Designation: C 91 and shall only be used in masonry applications.

Delete Subsection 701.04 on page 596, and substitute the following:

907-701.04--Blended Hydraulic Cement.

907-701.04.1--General.

907-701.04.1.1--Types of Blended Cement. Blended hydraulic cements (blended cements) shall be of the following types and conform to AASHTO Designation: M 240:

Type IS – Portland blast-furnace slag cement

Type IP – Portland-pozzolan cement

Type IL – Portland-limestone cement

Blended cement Types IS and IP for use in portland cement concrete or soil stabilization exposed to the moderate soluble sulfate condition or exposure to seawater as defined in Table 1 shall meet the Sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3 and the "(MS)" suffix shall be added to the type designation.

907-701.04.1.2--Alkali Content. All blended cement shall be made with clinker that would result in cement meeting the requirements of Subsection 907-701.02.1.2 when used in the production of AASHTO Designation: M 85, Type I or Type II cement.

907-701.04.2--Replacement by Other Cementitious Materials. The maximum replacement of blended cement Type IL by weight is 35% for fly ash or 50% for GGBFS. Replacement contents below 20% fly ash or 45% GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of blended cement by fly ash or GGBFS. No additional cementitious materials, such as Portland cement, performance hydraulic cement, fly ash, GGBFS, metakaolin, or others, shall be added to or as a replacement for blended cement Types IS and IP.

907-701.04.3--Exposure to Soluble Sulfate Conditions or Seawater. When portland cement concrete or blended cement for soil stabilization is exposed to moderate soluble sulfate conditions or to seawater, where the moderate soluble sulfate condition is defined in Table 1, the blended cement shall meet the sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3.

When portland cement concrete or blended cement for soil stabilization is exposed to severe soluble sulfate conditions, where the severe soluble sulfate condition is defined in Table 1, blended cements shall not be used.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-708-6

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Non-Metal Drainage Structures

Section 708, Non-Metal Structures and Cattlepasses, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-708.02.1.2--Fly Ash. In the first sentence of Subsection 708.02.1.2 on page 639, change “20 percent” to “25%”.

| **907-708.02.1.4--Coarse Aggregate.** Delete the last sentence of Subsection 708.02.1.4 on page 639.

907-708.02.3.2--Marking. Delete the second sentence of Subsection 708.02.3.2 on page 640, and substitute the following.

Machine made pipe shall be marked in accordance with one of the following methods: 1) the pipe shall be inscribed on the outside of the pipe and stenciled on the inside of the pipe, or 2) the pipe shall be inscribed on the inside of the pipe, only. All other pipe may be stenciled.

907-708.17--Corrugated Plastic Pipe Culverts.

907-708.17.1--Corrugated Polyethylene Pipe Culverts. Delete the first sentence of the first paragraph of Subsection 708.17.1 on page 645 and substitute the following.

Corrugated polyethylene pipe shall conform to the requirements of AASHTO Designation: M 294, Type S and/or SP, as applicable, and shall have soil tight joints, unless otherwise specified.

Delete the last sentence of the second paragraph of Subsection 708.17.1 on page 645.

After Subsection 708.17.1 on page 645, add the following.

907-708.17.1.1--Inspection and Final Acceptance of Corrugated Polyethylene Pipe Culverts.

Approximately 50% of the installed length of corrugated polyethylene pipe shall be inspected for excess deflection no sooner than 30 days after the embankment material over the pipe is placed to the required subgrade elevation or the maximum required fill height. The inspection shall be performed using either electronic deflectometers, calibrated television or video cameras, or a “go, no-go” mandrel that has an effective diameter of 95% of the nominal inside diameter of the pipe.

Pipe found to have deflection values greater than 5% shall be removed and replaced at no cost to the State.

907-708.17.2--Corrugated Poly (Vinyl Chloride) (PVC) Pipe Culverts. Delete the first sentence of the first paragraph of Subsection 708.17.2 on page 645 and substitute the following.

Corrugated poly (vinyl chloride) (PVC) pipe shall conform to the requirements of AASHTO Designation: M 304 and shall have soil tight joints, unless otherwise specified. Non-perforated PVC pipe used in underdrains shall either be manufactured with an ultra-violet light inhibitor or be fully coated with an ultra-violet light inhibitor.

After Subsection 708.17.2 on page 645, add the following.

907-708.17.2.1--Inspection and Final Acceptance of Poly (Vinyl Chloride) (PVC) Pipe Culverts. Approximately 50% of the installed length of PVC pipe shall be inspected for excess deflection no sooner than 30 days after the embankment material over the pipe is placed to the required subgrade elevation or the maximum required fill height. The inspection shall be performed using either electronic deflectometers, calibrated television or video cameras, or a “go, no-go” mandrel that has an effective diameter of 95% of the nominal inside diameter of the pipe.

Pipe found to have deflection values greater than 5% shall be removed and replaced at no cost to the State.

907-708.18--Sewer Pipe Used for Underdrains.

907-708.18.1--General. After the second paragraph of Subsection 708.18.1 on page 645 add the following.

In lieu of the pipe listed in this subsection, pipe meeting the requirements of Subsection 708.19 may also be used for plastic underdrain pipe.

907-708.18.3--Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe. After the first sentence of Subsection 708.18.3 on page 645, add the following.

Non-perforated PVC pipe shall either be manufactured with an ultra-violet light inhibitor or be fully coated with an ultra-violet light inhibitor.

907-708.18.4--Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe. Delete the paragraph in Subsection 708.18.4 on page 645 and substitute the following.

This pipe shall conform to the following requirements. For pipe sizes less than or equal to six inches ($\leq 6''$), the pipe shall be Class PS46 meeting the requirements of AASHTO Designation: M 278. For pipe sizes greater than six inches ($> 6''$), the pipe shall meet the requirements of AASHTO Designation: M 304. Non-perforated PVC pipe shall either be manufactured with an ultra-violet light inhibitor or be fully coated with an ultra-violet light inhibitor.

Delete Subsection 708.19 on page 645 and substitute the following.

907-708.19--Corrugated Polyethylene Pipe. This pipe shall be high density polyethylene pipe or drainage tubing meet the requirements of AASHTO Designation: M 294, Type S or SP, or AASHTO Designation: M 252, Type S or Type SP, as applicable.

907-708.22.2--Exceptions to AASHTO. Delete the sixth paragraph of Subsection 708.22.2 on page 647.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-709-1

CODE: (SP)

DATE: 05/05/2008

SUBJECT: Metal Pipe

Section 709, Metal Pipe, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After Subsection 709.02 on page 649, add the following:

907-709.02.1--Aluminized Corrugated Metal Culvert Pipe and Pipe Arches. All aluminized metal pipe and arches shall be manufactured from Type 2 corrugated metal pipe and arches in accordance with the requirements of Subsection 709.02.

907-709.03--Bituminous Coated Corrugated Metal pipe and Pipe Arches.

907-709.03.1--Materials. Delete the first sentence of the first paragraph of Subsection 709.03.1 on page 649, and substitute the following:

Bituminous coated corrugated metal pipe and arches shall conform to the requirements of AASHTO Designation: M 190 and be completely coated inside and out with an asphalt cement which will meet the performance requirements hereinafter set forth.

907-709.05--Polymer Coated Corrugated Metal Pipe and Pipe Arches. Delete the first sentence of the first paragraph of Subsection 709.05 on pages 649 and 650, and substitute the following:

Polymer coated corrugated metal pipe and arches shall conform to the requirements of AASHTO Designation: M 245, except the minimum gauge thickness shall be as shown on the plans or in the contract; however, corrugated metal pipe manufactured from sheets thicker than that specified will be acceptable when approved by the Engineer. The internal diameter of corrugated metal pipe will be determined by inside measurement between the crests of the corrugations. Corrugations greater than 3" x 1" will not be allowed in arch pipe.

907-709.06--Corrugated Metal Pipe for Underdrains. Delete the sentence in Subsection 709.06 on page 650, and substitute the following:

Corrugated metal pipe shall conform to AASHTO Designation: M 36, Type III. Type I pipe which has been perforated to permit the in-flow or out-flow of water may be used in lieu of Type III pipe.

907-709.06.1--Aluminized Corrugated Metal Culvert Pipe For Underdrains. All aluminized corrugated metal pipe for underdrains shall be manufactured from Type 2 corrugated metal pipe

and arches in accordance with the requirements of AASHTO Designation: M 36, Type III. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.07--Bituminous Coated Corrugated Metal Pipe for Underdrains. Delete the sentence in Subsection 709.07 on page 650, and substitute the following:

Bituminous coated corrugated metal pipe shall conform to the requirements of AASHTO Designation: M 190, Type A with a bituminous coating applied in accordance with the requirements of Subsection 709.03. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.08--Polymer Coated Corrugated Metal Pipe for Underdrains. Delete the sentence in Subsection 709.08 on page 650, and substitute the following:

The metal pipe for underdrains shall conform to the requirements of AASHTO Designation: M 245, Type III and the polymer coating shall conform to the requirements of Subsection 709.05. Type I pipe which has been perforated to permit the in-flow or out-flow of water may be used in lieu of Type III pipe. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.09--Corrugated Aluminum Alloy Culvert Pipe and Arches. Delete the first sentence in Subsection 709.09 on page 650, and substitute the following:

Corrugated aluminum culvert pipe and arches shall conform to the requirements of AASHTO Designation: M 196, Type IA.

907-709.10--Corrugated Aluminum Alloy Pipe for Underdrains. Delete the first sentence in Subsection 709.10 on page 650, and substitute the following:

Corrugated aluminum pipe underdrains shall conform to the requirements of AASHTO Designation: M 196, Type III. Type I pipe which has been perforated to permit the in-flow or out-flow of water may be used in lieu of Type III pipe.

907-709.11--Bituminous Coated Corrugated Aluminum Alloy Culvert Pipe and Arches. Delete the sentence in Subsection 709.11 on page 650, and substitute the following:

Bituminous coated aluminum culvert pipe and arches shall conform to AASHTO Designation: M 196, Type IA, and in addition shall be coated inside and out as specified in Subsection 709.03. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.13--Bituminous Coated Corrugated Aluminum Alloy Pipe for Underdrains. Delete the sentence in Subsection 709.13 on page 650, and substitute the following:

This pipe shall conform to AASHTO Designation: M 196, Type III, and shall be coated with bituminous material conforming to AASHTO Designation: M 190, type coating as specified. Manufacturer must repair any damaged coating caused from perforating the pipe.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-711-4

CODE: (IS)

DATE: 06/26/2009

SUBJECT: Synthetic Structural Fiber Reinforcement

Section 711, Reinforcement and Wire Rope, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After Subsection 711.03.4.3 on page 665, add the following:

907-711.04--Synthetic Structural Fiber. The synthetic structural fibers shall be approved for listing in the Department's "Approved Sources of Materials" prior to use. The synthetic structural fibers shall be added to the concrete and mixed in accordance with the manufacturer's recommended methods.

907-711.04.1--Material Properties. The fibers shall meet the requirements of ASTM Designation: C 1116, Section 4.1.3. The fibers shall be made of polypropylene, polypropylene/polyethylene blend, nylon, or polyvinyl alcohol (PVA).

907-711.04.2--Minimum Dosage Rate. The dosage rate shall be such that the average residual strength ratio ($R_{150,3.0}$) of fiber reinforced concrete beams is a minimum of 20.0 percent when the beams are tested in accordance with ASTM Designation: C 1609. The dosage rate for fibers shall be determined by the following.

The fiber manufacturer shall have the fibers tested by an acceptable, independent laboratory acceptable to the Department and regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology and approved to perform ASTM Designations: C 39, C 78, and C192.

The laboratory shall test the fibers following the requirements of ASTM Designation: C 1609 in a minimum of three (3) test specimens cast from the same batch of concrete, molded in 6 x 6 x 20-inch standard beam molds meeting the requirements of ASTM Designation: C 31. The beams shall be tested on an 18-inch span. The tests for $R_{150,3.0}$ shall be performed when the average compressive strength of concrete used to cast the beams is between 3500 and 4500 psi. The tests for compressive strength shall follow the requirements of ASTM Designation: C 39. The average compressive strength shall be determined from a minimum of two (2) compressive strength cylinders.

The value for $R_{150,3}$ shall be determined using the following equation:

$$R_{150,3.0} = \frac{f_{150,3.0}}{f_1} \times 100$$

The residual flexural strength ($f_{150,3.0}$) shall be determined using the following equation:

$$f_{150,3.0} = \frac{P_{150,3.0} \times L}{b \times d^2}$$

where:

$f_{150,3.0}$ is the residual flexural strength at the midspan deflection of $L/150$, (psi),

$P_{150,3.0}$ is the residual load capacity at the midspan deflection of $L/150$, (lbf),

L is the span, (in),

b is the width of the specimen at the fracture, (in), and

d is the depth of the specimen at the fracture, (in).

For a 6 x 6 x 20-inch beam, the $P_{150,3.0}$ shall be measured at a midspan deflection of 0.12 inch.

Additionally, $R_{150,3.0}$, $f_{150,3.0}$, and $P_{150,3.0}$ may also be referred to as R_{150}^{150} , f_{150}^{150} , and P_{150}^{150} respectively.

At the dosage rate required to achieve the minimum $R_{150,3}$, the mixture shall both be workable and the fibers shall not form clumps.

The manufacturer shall submit to the State Materials Engineer certified test reports from the independent laboratory showing the test results of each test specimen.

907-711.04.3--Job Control Requirements. The synthetic structural fibers shall be one from the Department's "Approved Sources of Materials."

At the required dosage rate, the mixture shall both be workable and the fibers shall not form clumps to the satisfaction of the Engineer. If the mixture is determined by the Engineer to not be workable or have clumps of fibers, the mixture may be rejected.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-713-6

CODE: (SP)

DATE: 03/17/2016

SUBJECT: Admixtures for Concrete

Section 713, Concrete Curing Materials and Admixtures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

After the second paragraph of Subsection 713.01.2 on page 676, add the following.

Type 1-D compound may be used on bridge rails, median barriers, and other structures requiring a spray finish. When Type 1-D compound is used, it will be the responsibility of the Contractor to assure that the compound has dissipated from the structure prior to applying the spray finish and that the spray finish adheres soundly to the structure.

Delete Subsection 713.02 on pages 676 & 677, and substitute the following.

907-713.02--Admixtures for Concrete. Air-entraining admixtures used in Portland cement concrete shall comply with AASHTO Designation: M 154. Set-retarding, accelerating, and/or water-reducing admixtures shall comply with AASHTO Designation: M 194. Water-reducing admixture shall meet the minimum requirements for Type A. Set-retarding admixtures shall meet the minimum requirements for Type D. Admixtures providing a specific performance characteristic(s) other than those of water reduction or set retardation shall meet the minimum requirements for Type S. For admixtures meeting the requirements for Type S, the manufacturer shall provide data to substantiate the specific performance characteristic(s) to the satisfaction of the State Materials Engineer.

In order to obtain approval of an admixture, the State Materials Engineer shall have been furnished certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO Standard Specification.

The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

After an admixture has been approved, the Contractor shall submit to the State Materials Engineer, with each new lot of material shipped, a certification from the manufacturer in accordance with the requirements of Subsection 700.05.1 and stating the material is of the same composition as

originally approved and has not been changed or altered in any way. The requirement in Subsection 700.05.1(b) is not required on the certification from the manufacturer.

Admixtures containing chlorides will not be permitted.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

Admixtures shall only be used in accordance with the manufacturer's recommended dosage range as set forth in the manufacturer's approval request correspondence. When an admixture is used in Portland cement concrete, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.1--Source Approval. In order to obtain approval of an admixture, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO or Department Specification for the specific type and the dosage range for the specific type of admixture.

907-713.02.2--Specific Requirements. Admixtures containing chlorides will not be permitted.

907-713.02.3--Acceptance. The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

With each new lot of material shipped the Contractor shall submit to the State Materials Engineer, a notarized certification from the manufacturer showing that the material complies with the requirements of the applicable AASHTO or Department Specification.

When an admixture is used, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.4--Waterproofing Admixture. This product is used as a waterproofing admixture for cast in place concrete bridge decks and bridge deck topping.

The Contractor shall submit manufacturer's product data and installation methods for each type of the products required to demonstrate the product complies with specifications.

The materials shall be installed in accordance with manufacturer's instructions.

The waterproofing admixture shall be one of the following, or an approved equal.

- Xypex Admix
- Everdure Caltite
- Hycrete W1000

The dosage rate for the above admixtures shall be as follows:

- Xypex Admix shall be 15 pounds per cubic yard.
- Everdure Caltite shall be a minimum of 1.5% by weight of cement.
- Hycrete W1000 shall be a minimum one (1) gallon per cubic yard.

Any retardation of set that occurs will depend upon the concrete mix design and the dosage rate of the admixture.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-714-8

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Miscellaneous Materials

Section 714, Miscellaneous Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-714.05--Fly Ash. Delete Subsections 714.05.1 & 714.05.2 on pages 680 & 681, and substitute the following.

907-714.05.1--General. The fly ash source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of fly ash shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

Different classes of fly ash or different sources of the same class shall not be mixed or used in the construction of a structure or unit of a structure without written permission from the Engineer.

The Contractor shall provide suitable means for storing and protecting the fly ash from dampness. Separate storage silos, bins, or containers shall be provided for fly ash. Fly ash which has become partially set or contains lumps of caked fly ash shall not be used.

The temperature of the bulk fly ash shall not be greater than 165°F at the time of incorporation into the work.

All classes of fly ash shall meet the supplementary option chemical requirement for available alkalies listed in AASHTO Designation: M 295, Table 2. Class F fly ash shall have a calcium oxide (CaO) content of less than 6.0%. Class C fly ash shall have a CaO content of greater than or equal to 8.0%.

The replacement of Portland cement with fly ash shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

In addition to these requirements, fly ash shall meet the following specific requirements for the intended use.

907-714.05.2--Fly Ash for Use in Concrete. When used with Portland cement in the production of concrete or grout, the fly ash shall meet the requirements of AASHTO Designation: M 295, Class C or F, with the following exception:

The loss on ignition shall not exceed 6.0 percent.

No additional cementitious materials, such as blended hydraulic cement, GGBFS, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with fly ash.

907-714.06--Ground Granulated Blast Furnace Slag (GGBFS). Delete Subsection 714.06.1 on page 681, and substitute the following.

907-714.06.1--General. The GGBFS source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of GGBFS shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

The Contractor shall provide suitable means for storing and protecting the GGBFS against dampness and contamination. Separate storage silos, bins, or containers shall be provided for GGBFS. GGBFS which has become partially set, caked or contains lumps shall not be used.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing or other additions made to the GGBFS during production.

GGBFS from different mills shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer; except that this requirement will not be applicable to cement treatment of design soils or bases.

No additional cementitious materials, such as blended hydraulic cement, fly ash, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with GGBFS in the production of concrete. The replacement of Portland cement with GGBFS shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

Delete Subsection 714.07 on page 682, and substitute the following.

907-714.07--Additional Cementitious Materials.

907-714.07.1--Metakaolin.

907-714.07.1.1--General. Metakaolin shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Metakaolin from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with metakaolin in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the metakaolin during production.

907-714.07.1.2--Source Approval. The approval of each metakaolin source shall be on a case

by case basis as determined by the State Materials Engineer. In order to obtain approval of a metakaolin source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the metakaolin meets all the requirements of AASHTO Designation: M295, including the Effectiveness in contributing to sulfate resistance, Procedure A, listed in AASHTO Designation: M295, Table 4 for Supplementary Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of metakaolin from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed metakaolin shall be incorporated at the rate of 10% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.1.3--Storage. The Contractor shall provide suitable means for storing and protecting the metakaolin against dampness and contamination. Metakaolin which has become partially set, caked, or contains lumps shall not be used.

907-714.07.1.4--Specific Requirements. Metakaolin shall meet the requirements of AASHTO Designation: M 295, Class N with the following modifications:

1. The sum of $SiO_2 + Al_2O_3 + Fe_2O_3$ shall be at least 85%. The Material Safety Data Sheet shall indicate that the amount of crystalline silica, as measured by National Institute of Occupation Safety and Health (NIOSH) 7500 method, after removal of the mica interference, is less than 1.0%.
2. The loss on ignition shall be less than 3.0%.
3. The available alkalies, as equivalent Na_2O , shall not exceed 1.0%.
4. The amount of material retained on a No. 325 mesh sieve shall not exceed 1.0%.
5. The strength activity index at seven (7) days shall be at least 85%.

907-714.07.1.5--Acceptance. With each new lot of material shipped the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the requirements AASHTO Designation: M295, Class N and the requirements of this Subsection.

The Department reserves the right to sample, for check tests, any shipment or lot of metakaolin delivered to a project.

907-714.07.2--Silica Fume.

907-714.07.2.1--General. Silica fume shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Silica fume from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, performance hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with silica fume in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the silica fume during production.

907-714.07.2.2--Source Approval. The approval of each silica fume source shall be on a case by case basis as determined by the State Materials Engineer. In order to obtain approval of a silica fume source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the silica fume meets all the requirements of AASHTO Designation: M307, Table 3, including the Sulfate resistance expansion, listed in the table for Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of silica fume from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed silica fume shall be incorporated at the rate of 8% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.2.3--Storage. The Contractor shall provide suitable means for storing and protecting the silica fume against dampness and contamination. Silica fume which has become partially set, caked, or contains lumps shall not be used.

907-714.07.2.4--Acceptance. With each new lot of material shipped, the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the Chemical and Physical Requirements of AASHTO Designation: M307.

The Department reserves the right to sample, for check tests, any shipment or lot of silica fume delivered to a project.

Delete Subsection 714.11.6 on pages 690 and 691, and substitute the following.

907-714.11.6--Rapid Setting Cementitious Patching Compounds for Concrete Repair. Rapid setting concrete patching compounds must be approved for listing in the Department's "Approved Sources of Materials" prior to use. Upon approval, a product must be recertified every four (4) years to remain on the "Approved Sources of Materials" list. Each product shall be pre-measured and packaged dry by the manufacturer. All liquid solutions included by the manufacturer as components of the packaged material shall be packaged in a watertight container. The manufacturer may include aggregates in the packaged material or recommend the addition of Contractor furnished aggregates.

The type, size and quantity of aggregates, if any, to be added at the job site shall be in accordance with the manufacturer's recommendations and shall meet the requirements of Subsection 703.02 for fine aggregate and Subsection 703.03 for coarse aggregate. Required mixing water to be added at the job site shall meet the requirements of Subsection 714.01.2.

Only those bonding agents, if any, recommended by the manufacturer of the grout or patching compounds may be used for increasing the bond to old concrete or mortar surfaces.

Patching compounds containing soluble chlorides will not be permitted when in contact with steel.

Site preparation, proportioning of materials, mixing, placing and curing shall be performed in accordance with the manufacturer's recommendation for the specific type of application, and the Contractor shall furnish a copy of these recommendations to the Engineer.

Rapid setting cementitious concrete patching compounds, including components to be added at the job site, shall conform to the following physical requirements:

Non-shrink cementitious grouts shall not be permitted for use.

Compressive strength shall equal or exceed 3000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

Bond strength shall equal or exceed 1000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

The material shall have a maximum length change of $\pm 0.15\%$ in accordance with ASTM C 928 for Type R2 concrete or mortar.

The Contractor shall furnish to the Engineer three copies of the manufacturer's certified test report(s) showing results of all required tests and certification that the material meets the specifications when mixed and placed in accordance with the manufacturer's instructions. When the mixture is to be placed in contact with steel, the certification shall further state that the packaged material contains no chlorides. Certified test report(s) and certification shall be furnished for each lot in a shipment.

The proportioning of materials must be approved by the State Materials Engineer and any subsequent change in proportioning must also be approved. A sample of each component shall be submitted to the Engineer along with the quantity or percentage of each to be blended. At least 45 days must be allowed for initial approval.

The proportioning of materials for subsequent lots may be approved by the State Materials Engineer upon receipt of certification from the manufacturer that the new lot of material is the same composition as that originally approved by the Department and that the material has not been changed or altered in any way.

907-714.11.7--Commercial Grout for Anchoring Doweled Tie Bars in Concrete. Before Subsection 714.11.7.1 on page 691, add the following.

Approved Non-“Fast Set” Epoxy anchor systems as specified below may be used for the repair of concrete pavements that do not involve permanent sustained tension applications or overhead applications.

“***Fast Set Epoxy***” may not be used for any Adhesive Anchor Applications. Adhesive Anchor Systems (Fast Set epoxy or otherwise) shall not be used for permanent sustained tension applications or overhead applications. “Fast Set Epoxy” refers to an epoxy produced by the Sika Corporation called Sikadur AnchorFix-3 and repackaged for sale under a variety of names/companies listed at the Federal Highway Administration web site at the following link:

<http://www.fhwa.dot.gov/Bridge/adhesives.cfm>

907-714.11.7.4--Acceptance Procedure. After the last sentence of the first paragraph of Subsection 714.11.4 on page 691, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the “Approved Sources of Materials” list.

907-714.11.8--Epoxy Joint Repair System.

907-714.11.8.1--General. After the last sentence of the first paragraph of Subsection 714.11.8.1 on page 692, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the “Approved Sources of Materials” list.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-715-4

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Roadside Development Materials

Section 715, Roadside Development Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-715.02.2.1--Agricultural Limestone. Delete the first sentence of Subsection 715-02.2.1 on page 704 and substitute the following.

Agricultural limestone shall be either a hard-rock limestone material or a marl or chalk agricultural liming material as addressed in the latest amendment to the Mississippi Agricultural Liming Material Act of 1993, published by the Mississippi Department of Agriculture and Commerce.

907-715.02.2.1.1--Screening Requirements. Delete the first sentence of Subsection 715.02.2.1.1 on page 704.

Delete Subsection 715.02.2.1.2 on page 704 and substitute the following.

907-715.02.2.1.2--Calcium Carbonate Equivalent. Marl or chalk liming material shall not have less than 70% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry weight basis.

907-715.02.2.1.3--Neutralizing Values. Hard-rock limestone material shall have a minimum Relative Neutralizing Value (RNV) of 63.0%, which is determined as follows.

$$\% \text{ RNV} = \text{CCE} \times (\% \text{ passing \#10 mesh} + \% \text{ passing \#50 mesh}) / 2$$

Where: CCE = Calcium Carbonate Equivalent

907-715.03--Seed.

907-715.03.2--Germination and Purity Requirements. Add the following to Table B on page 705.

Name (Kind)	Name (Variety)	Percent Germination	Percent Purity
GRASSES			
Rye Grass	Annual	80	98
Wheat	-	80	98

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-720-2

CODE: (IS)

| DATE: 05/01/2013

| SUBJECT: Pavement Marking Materials

Section 720, Pavement Marking Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

| **907-720.01--Glass Beads.** After the first sentence of Subsection 720.01 on page 729, add the following.

The glass beads shall contain no more than 200 ppm (mg/kg) total concentration for lead, arsenic, or antimony. The manufacture shall furnish the Engineer with a certified test report indicating that the glass beads meet the above requirement.

907-720.02--Thermoplastic Pavement Markings. Delete the first paragraph of Subsection 720.02 on page 730 and substitute the following.

The thermoplastic material shall be lead free and conform to AASHTO Designation: M 249 except the glass beads shall be moisture resistant coated.

After the first sentence of the second paragraph of Subsection 720.02 on page 730, add the following.

In addition, the certification for the thermoplastic material shall state that the material is lead free.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-804-19

DATE: 03/22/2016

SUBJECT: Concrete Bridges and Structures

Delete the second and third paragraphs of Subsection 907.804.03.16.2 on page 37, and substitute the following.

For bridge decks when the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods. Additionally, when the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-19

CODE: (SP)

DATE: 11/10/2015

SUBJECT: Concrete Bridges and Structures

Section 804, Concrete Bridges and Structures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby deleted and replaced as follows.

SECTION 907-804--CONCRETE BRIDGES AND STRUCTURES

907-804.01--Description. This work consists of constructing concrete bridges and structures in accordance with these specifications and in reasonably close conformity with the dimensions, designs, lines, and grades indicated on the plans or established.

Construction of box bridges shall be in accordance with Sections 601 and 602.

907-804.02--Materials.

907-804.02.1--General. Concrete produced and controlled from this specification shall be accepted upon proper certification of concrete production through an approved quality control program and verification by job site acceptance criteria. The Contractor shall develop and implement a quality control program which shall be used to maintain the required properties of concrete. For projects with 1000 cubic yards and more, quality control and acceptance shall be achieved through statistical evaluation of test results. For projects of more than 200 but less than 1000 cubic yards, quality control and acceptance shall be achieved by individual test results. For projects less than or equal to 200 cubic yards, refer to the requirements of TMD-20-05-00-000 "Sampling and Testing of Small Quantities of Miscellaneous Materials" for mixture design and testing requirements.

The materials for concrete bridges and structures, when sampled and tested in accordance with Subsection 700.03, shall meet the requirements of the following Subsections:

Portland Cement	701.01 and 701.02
Blended Cement	907-701.01 and 907-701.04
Admixtures	713.02
Fly Ash	714.05
Ground Granulated Blast Furnace Slag (GGBFS)	907-714.06
Silica Fume	907-714.07.2
Water	714.01.1 and 714.01.2
Fine Aggregate	703.02
Coarse Aggregate	703.03
Lightweight Aggregate	907-703.19
Curing Materials	713.01

Joint Materials	707.01, 707.02, and 707.07
Structural Steel Joints and Bearing Devices	717.01
Bearing Pads	714.10
Wire Rope or Wire Cable for Prestressed Concrete	700.01 and 711.03
Sprayed Finish for Concrete Surface	714.12
Reinforcing Steel	711.02

907-804.02.2--Use, Care, and Handling. The use, care, and handling of materials shall conform to the applicable requirements of Subsection 501.03.10 and the specific requirements of Subsections 907-804.02.4 and 907-804.02.5. Unless otherwise authorized, only fine aggregate or coarse aggregate of one type and from the same source shall be used in the construction of any one unit of a structure. Should the Contractor, with written permission of the Engineer, elect to substitute high early strength cement for cement of the type specified, the Contractor will not receive additional compensation for the substitution.

907-804.02.3--Blank.

907-804.02.4--Care and Storage of Concrete Aggregates. The handling and storage of aggregates shall be such as to prevent segregation or contamination with foreign materials. The Engineer may require that aggregates be stored on separate platforms at satisfactory locations.

When specified, coarse aggregates shall be separated into two or more sizes in order to secure greater uniformity of the concrete mixture. Different sizes of aggregate shall be stored in separate stock piles sufficiently removed from each other to prevent the material at the edges of the piles from becoming intermixed.

907-804.02.5--Storage of Cementitious Materials. All cementitious materials shall be stored in suitable weather-proof buildings or bins. These buildings or bins shall be placed in locations approved by the Engineer. Provision for storage shall be ample, and the shipments of cementitious materials as received shall be stored separately or other provisions made to the satisfaction of the Engineer for easy access for the identification, inspection, and sampling of each shipment as deemed desirable. Stored cementitious materials shall meet the test requirements at any time after storage when a retest is ordered by the Engineer.

On small jobs, open storage consisting of a raised platform and ample waterproof covering may be permitted by written authorization from the Engineer.

When specified, the Contractor shall keep accurate records of deliveries of cementitious materials and of their use in the work. Copies of these records shall be supplied in the form required by the Engineer.

907-804.02.6--Classification and Uses of Concrete. When a specific class of concrete is not specified on the plans or in the contract documents, the structure or parts thereof shall be constructed with the class of concrete as directed by the Engineer.

The classes and their uses are as follows:

- (1) Class AA - Concrete for bridge construction and concrete exposed to seawater.
- (2) Class A - Concrete shown as Class A shall herein be classified as and required to meet the performance criteria of Class AA.
- (3) Class B - General use, heavily reinforced sections, cast-in-place concrete piles, and conventional concrete piles.
- (4) Class C - Massive sections or lightly reinforced sections.
- (5) Class D - Massive unreinforced sections and riprap.
- (6) Class F - Concrete for prestressed members.
- (7) Class FX - Extra strength concrete for prestressed members, as shown on plans.
- (8) Class S - For all seal concrete deposited under water.
- (9) Class DS - Drilled Shaft

907-804.02.7--Blank.

907-804.02.8--Laboratory Accreditation. The Contractor shall be responsible for furnishing the laboratory used to perform concrete quality control tests. The laboratory may be the Contractor's facility, the concrete producer's facility, or a certified independent testing laboratory.

Only laboratories certified by the Mississippi Department of Transportation are qualified to perform material testing. Certification by AASHTO Accreditation Program (AAP) will be acceptable if the laboratory is listed in the latest AAP publication and maintains accreditation to completion of concrete work.

The Contractor's laboratory designated for quality control testing shall have equipment necessary to test aggregates and concrete for the test methods listed in Table 1.

Table 1

AASHTO: R 39	Making and Curing Concrete Test Specimens in the Laboratory
AASHTO: R 60	Sampling Freshly Mixed Concrete
AASHTO: T 2	Sampling Aggregates
AASHTO: T 19	Bulk Density ("Unit Weight") and Voids in Aggregates
AASHTO: T 22	Compressive Strength of Cylindrical Concrete Specimens
AASHTO: T 23	Making and Curing Concrete Test Specimens in the Field
AASHTO: T 27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO: T 84	Specific Gravity and Absorption of Fine Aggregate
AASHTO: T 85	Specific Gravity and Absorption of Coarse Aggregate
AASHTO: T 119	Slump of Hydraulic Cement Concrete
AASHTO: T 121	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
AASHTO: T 152	Air Content of Freshly Mixed Concrete by Pressure Method *
AASHTO: T 196	Air Content of Freshly Mixed Concrete by the Volumetric Method *
AASHTO: T 231	Capping Cylindrical Concrete Specimens
AASHTO: T 248	Reducing Field Samples of Aggregate to Testing Size
AASHTO: T 255	Total Evaporable Moisture Content of Aggregate by Drying

AASHTO: T 325	Standard Method of Test for Estimating the Strength of Concrete in Transportation Construction by Maturity Tests **
ASTM: C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete
ASTM: C 1074	Standard Practice for Estimating Concrete Strength by the Maturity Method **

* Equipment necessary for either pressure or volumetric air content.

** Equipment necessary for estimating concrete strength following the maturity method.

Testing equipment shall have been inspected by the Department or through the AASHTO Accreditation Program. Testing equipment calibration files shall be made available upon request by the Department.

907-804.02.9--Testing Personnel. Technicians testing portland cement concrete, for either acceptance or production control purposes, shall be certified by an accepted certification program. Recertification is required for each Class after five years. Certification requirements are listed in Table 2.

Table 2

Concrete Technician's Tasks	Test Method Required	Certification Required**
Sampling or Testing of Plastic Concrete	AASHTO Designation: R 60, T 23, T 119, T 121, T 152, T 196, and ASTM Designation: C 1064	MDOT Class I certification
Compressive Strength Testing of Concrete Cylinders	AASHTO Designation: T 22 and T 231	MDOT Concrete Strength Testing Technician certification
Sampling of Aggregates	AASHTO Designation: T 2	Work under the supervision of a MDOT Class II certified technician
Testing of Aggregates	AASHTO Designation: T 19, T 27, T 84, T 85, T 248, and T 255	MDOT Class II certification
Proportioning of Concrete Mixtures*	AASHTO Designation: M 157 and R 39	MDOT Class III certification
Interpretation and Application of Maturity Meter Readings	AASHTO Designation: T 325 and ASTM Designation: C 1074	MDOT Class III certification or Two hours maturity method training

* Technicians making concrete test specimens for meeting the requirements of Subsection 907-804.02.10.1.2 shall be MDOT Class I certified and under the direct supervision of an MDOT Class III certified technician.

** MDOT Class I certification encompasses the same test procedures and specifications as ACI Concrete Field Testing Technician-Grade I. MDOT Class II certification encompasses the same test procedures and specifications as ACI Aggregate Testing Technician-Level 1. MDOT Concrete Strength Testing Technician encompasses the same test procedures and specifications as ACI Concrete Strength Testing certification.

Specific requirements for each level of certification are in the latest edition of the Department's *Concrete Field Manual*. Current MDOT Class I, MDOT Class II, and/or MDOT Class III certifications shall be acceptable until those certifications expire. Upon expiration of a current certification, recertification with the certifications listed in Table 2 shall be required. Technicians performing either specific gravity testing of aggregates or compressive strength tests shall be required to either:

- have the required MDOT certification listed in Table 2, or
- have a current MDOT Class III certification or work under the direct supervision of current MDOT Class III technician, and have demonstrated the specific gravity and/or compressive strength test during the inspection of laboratory equipment by the Materials Division, Concrete Section.

907-804.02.10--Portland Cement Concrete Mixture Design. At least 10 days prior to production of concrete, the Contractor shall submit to the Engineer proposed concrete mixture designs complying with the Department's *Concrete Field Manual*. Materials shall be from approved sources meeting the requirements of the Standard Specifications. Proportions for the mixture designs shall be for the class concrete required by the contract plans and shall meet the requirements of the "Master Proportion Table for Structural Concrete Design" listed in Table 3. The concrete producer shall assign a permanent unique mixture number to each mixture design. Each mixture design shall be field verified as required in Subsection 907-804.02.10.3. Acceptable field verification data shall be required for final approval of a mixture design.

All concrete mixture designs will be reviewed by the Materials Division prior to use. Concrete mixture designs disapproved will be returned to the Contractor with a statement explaining the disapproval.

If the Contractor chooses to cure the concrete in accordance with the requirements listed under **Length of Time Defined by Development of Compressive Strength** in Subsection 907-804.03.17, the compressive strength/maturity relationship shall be developed for the mixture design for a minimum of 28 days following the requirements of Subsection 907-804.03.15. The compressive strength/maturity relationship information shall be submitted with the mixture design information.

Table 3
MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN

Class	Coarse Aggregate Size No.*	Maximum Water/Cementitious** Ratio	Specified Compressive Strength (f'_c) psi	Maximum Permitted Slump*** inches	Nominal Total Air Content**** %
AA*****	57 or 67	0.45**	4000	3***	4.5*****
B	57 or 67	0.50	3500	4	4.5
C	57 or 67	0.55	3000	4	4.5
D	57 or 67	0.70	2000	4	4.5
F	67	0.40	5000	3	*****
FX	67	(As per mixture design)	(As shown on plans)	3	*****
S	57 or 67	0.45	3000	8	4.5
DS	67	0.45	4000	***	*****

* Maximum size aggregate shall conform to the concrete mixture design for the specified aggregate. Other smaller coarse aggregate sizes meeting the requirements of Subsection 907-703.03.2.4 may also be used in conjunction with the coarse aggregate sizes listed. Lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 may also be used as a partial replacement for fine aggregate.

** The replacement limits of portland cement by weight by other cementitious materials (such as fly ash, GGBFS, silica fume, or others) shall be in accordance with the values in Subsection 907-701.02. Other hydraulic cements may be used in accordance with the specifications listed in Section 701.

For Class AA concrete for concrete bridge decks, the water / cementitious ratio range shall be 0.43 – 0.45 and the maximum cementitious material content shall be 550 pounds per cubic yard. The “maximum cementitious material content” refers to the total weight of Portland cement, blended hydraulic cement, GGBFS, silica fume, and fly ash.

*** Unless otherwise specified, minus slump requirements shall meet those set forth in Table 3 of AASHTO Designation: M157.

For Class AA concrete for concrete bridge decks the maximum permitted slump may be increased to five (5) inches. Also, for each additional pound of fibers per cubic yard added in excess of the requirement in Note ***** , an additional inch of slump will be allowed up to a maximum permitted slump of eight (8) inches.

For Class AA not used in bridge decks and all other Classes of concrete, the maximum permitted slump may be increased to eight (8) inches.

For Class DS concrete for drilled shafts the slump range shall be 8 inches $\pm$ 1 inch.

***** The tolerance on total air content shall be $\pm$ 1.5%. For Class AA concrete for concrete bridge decks, the nominal total air content may be increased to 6.5%.

***** For Class AA concrete for concrete bridge decks, an approved synthetic structural fiber meeting the requirements of Special Provision 907-711, Synthetic Structural Fiber Reinforcement, shall be incorporated into the mixture at 1.25 times the approved dosage rate.

***** Entrained air is not required except for concrete exposed to seawater. For concrete not exposed to seawater, the total air content shall not exceed 6.0%. For concrete exposed to seawater, the nominal total air content shall be 4.5%.

At least one water-reducing admixture or water-reducing/set-retarding admixture shall be used in all classes of concrete in accordance with the manufacturer's recommended dosage range. Admixtures providing a specific performance characteristic other than those of water reduction or set retardation may be used in accordance with the manufacturer's recommended dosage range. Mixture designs containing accelerating admixtures will not be approved. Any combinations of admixtures shall be approved by the Engineer before their use.

907-804.02.10.1--Proportioning of Portland Cement Concrete Mixture Design. Proportioning of portland cement concrete shall be based on an existing mixture of which the producer has field experience and documentation or based on a recently batched laboratory mixture tested according to the required specifications.

907-804.02.10.1.1--Proportioning on the Basis of Previous Field Experience of Trial Mixtures. Where a concrete production facility has a record, based on at least 10 consecutive strength tests from at least 10 different batches within the past 12 months from a mixture not previously used on Department projects, the standard deviation shall be calculated. The record of tests from which the standard deviation is calculated shall:

- a) Represent similar materials and conditions to those expected. Changes in materials and proportions within the test record shall not have been more closely restricted than those for the proposed work.
- b) Represent concrete produced to meet a specified strength.
- c) Consist of 10 consecutive tests, average of two cylinders per test, tested at 28 days.

The standard deviation, s , shall be calculated as:

$$s = \left[\sum (X_i - \bar{X})^2 \div (N - 1) \right]^{1/2}$$

where:

X_i = the strength result of an individual test

$\bar{X}$ = the average of individual tests in the series

N = number of tests in the series

When the concrete production facility does not have a record of tests for calculation of standard deviation, as required in the above formula, the requirements of Subsection 907-804.02.10.1.2 shall govern.

The required average compressive strength (f'_{cr}) used as the basis for selection of concrete proportions shall conform to the inequality listed below, while using a standard deviation, s , calculated as shown above.

$$\bar{X} \geq f'_{cr}$$

where:

$$f'_{cr} = f'_c + 1.43s$$

where:

f'_c = specified compressive strength of concrete, psi

f'_{cr} = required average compressive strength of concrete, psi

s = standard deviation, psi

1.43 represents the Lower Quality Index necessary to assure that 93% of compressive strength tests are above f'_c .

907-804.02.10.1.2--Proportioning on the Basis of Laboratory Trial Mixtures. When an acceptable record of field test results is not available, concrete proportions shall be established based on laboratory trial mixtures meeting the following restrictions:

- a) The combination of materials shall be those intended for use in the proposed work.
- b) Trial mixtures having proportions and consistencies suitable for the proposed work shall be made using the ACI 211.1 as a guide to proportion the mixture design.
- c) Trial mixtures shall be designed to produce a slump within $\pm 3/4$ inch of the maximum permitted, and for air-entrained concrete, ± 0.5 percent of the maximum total air content. The temperature of freshly mixed concrete in trial mixtures shall be reported.
- d) For each proposed mixture, at least three compressive test cylinders shall be made and cured in accordance with AASHTO Designation: R 39. Each change of water-cement ratio shall be considered a new mixture. The cylinders shall be tested for strength in accordance with AASHTO Designation: T 22 and shall be tested at 28 days.
- e) The required average strength of laboratory trial mixes shall exceed f'_c by 1200 psi for concrete mixture designs less than 5000 psi and by 1400 psi for concrete mixture designs of 5000 psi or more.

- f) The laboratory trial batch mixtures shall have been made within the previous 12 months before being submitted for approval and shall not have been previously used on Department projects.

907-804.02.10.2--Documentation of Average Strength. Documentation that the proposed concrete proportions will produce an average strength equal to or greater than the required average shall consist of the strength test records from field tests or results from laboratory trial mixtures.

907-804.02.10.3--Field Verification of Concrete Mixture Design. Concrete mixture designs will only be tentatively approved pending field verification. The requirements for yield, slump, or total air content shall be successfully met within the first three (3) production days. Mixture designs may be transferred to other projects without additional field verification testing, once the mixture design has passed the field verification process.

The Contractor's Certified Quality Control Technicians shall test each concrete mixture design upon the first placement of the mix. Aggregates and concrete tests during the first placement shall be as follows.

<u>Aggregates</u>	<u>Concrete</u>
Bulk Specific Gravity	Water Content
Moisture	Slump
Gradation	Air Content
	Unit Weight
	Yield

For all Classes of concrete, the mixture shall be verified to yield within 2.0% of the correct volume when all the mix water is added to the batch.

For all Classes of concrete other than DS, F, and FX, the mixture shall produce a slump within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"), and producing a total air content within a minus 1½ percent tolerance of the maximum allowable air content in Table 3.

For Class DS, the slump shall be within the requirements in Note *** below Table 3. For Class DS exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in Note ***** below Table 3. For Class DS not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

For Classes F and FX, the slump shall be within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"). For Classes F and FX exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in

Note ***** below Table 3. For Classes F and FX not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

The mixture shall be adjusted and retested, if necessary, on subsequent placements until the above mentioned properties are met.

If the requirements for yield, slump, or total air content are not met within the first three (3) production days, subsequent field verification testing shall not be permitted on Department projects, and the mixture design shall not be used until the requirements listed above are met. Any mixture design adjustments, changes in the mixture proportions, are to be made by a Class III Certified Technician representing the Contractor. After the mixture design has been verified and adjustments made, verification test results will be reviewed by the Engineer.

907-804.02.10.3.1--Slump Retention of Class DS Concrete Mixture Designs. Prior to concrete placement, the Contractor shall provide test results of a slump loss test using approved methods to demonstrate that the mixture meets the four hour requirement in Subsection 907-803.02.7.1. These tests shall be conducted successfully by an approved testing laboratory within 30 days prior to installation of the trial shaft, with personnel from the Materials Division present. The slump loss test shall be conducted at temperatures and conditions similar to those expected at the job site at the time of the installation of the trial shaft. The sample for the slump loss test shall be from a minimum batch size of four (4) cubic yards of concrete. If the time between the previous successful slump loss test and the installation of the trial shaft exceeds 30 days, another successful slump loss test shall be performed on the first truckload of concrete as part of the installation of the trial shaft. This requirement limiting the time between the previous slump loss test and an installation of the trial shaft also applies to Class DS concrete mixture designs being transferred from another project. During any shaft installation a slump loss test shall be conducted by the Contractor at the direction of the Engineer from the concrete at the site for verification of slump loss requirements using a sample from a minimum batch size of four cubic yards of concrete.

907-804.02.10.4--Adjustments of Mixtures. The mixture design may be adjusted by the Class III Certified Technician representing the Contractor in accordance with the allowable revisions listed in the Department's *Concrete Field Manual*, paragraph 5.7. Written notification shall be submitted to the Engineer a minimum of seven (7) days prior to any source or brand of material change, aggregate size change, allowable material type change, or decrease in any cementitious material content. Any adjustments of the concrete mixture design shall necessitate repeat of field verification procedure as described in Subsection 907-804.02.10.3 and approval by the Engineer.

907-804.02.11--Concrete Batch Plants. The concrete batch plant shall meet the requirements of the National Ready Mixed Concrete Association *Quality Control Manual, Section 3, Plant Certification Checklist* as outlined in the latest edition of the Department's *Concrete Field Manual*. The Contractor shall submit a copy of the approved checklist along with proof of calibration of batching equipment, i.e., scales, water meter, and admixture dispenser, to the Engineer 30 days prior to the production of concrete.

For projects with 1000 cubic yards and more, the concrete batch plant shall meet the requirements for an automatic system capable of recording batch weights. It shall also have automatic moisture

compensation for the fine aggregate. For projects of more than 200 but less than 1000 cubic yards the plant can be equipped for manual batching with a fine aggregate moisture meter visible to the plant operator.

The concrete batch plant shall have available adequate facilities to cool concrete during hot weather.

Mixer trucks to be used on the project are to be listed in the checklist and shall meet the requirements of the checklist.

907-804.02.12--Contractor's Quality Control. The Contractor shall provide and maintain a quality control program that will provide reasonable assurance that all materials and products submitted to the Department for acceptance will conform to the contract requirements, whether manufactured or processed by the Contractor or procured from suppliers, subcontractors, or vendors.

The Contractor's Quality Control program shall implement the minimum quality control requirements shown in Table 4, "CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL". The quality control activities shown in the table are considered to be normal activities necessary to control the production and placing of a given product or material at an acceptable quality level. To facilitate the Department's activities, all completed gradation samples shall be retained for a maximum of sixty (60) days by the Contractor until further disposition is designated by the Department.

The Contractor shall perform, or have performed, the tests required to substantiate product conformance to contract document requirements and shall also perform, or have performed, all tests otherwise required.

The Contractor's Quality Control program shall encompass the requirements of AASHTO Designation: M 157 into concrete production and control, equipment requirements, testing, and batch ticket information. The requirement of AASHTO Designation: M 157, Section 11.7 shall be followed except, on arrival to the job site, a maximum of 1½ gallons per cubic yard shall be allowed to be added. Water shall not be added at a later time. Job site adjustment of a batch using chemical admixtures or the mechanical adjustment of a batch may be performed by the Contractor if the requirements of Subsection 907-804.02.12.1.1 have been satisfactorily addressed in the Quality Control Plan. If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

The Contractor's quality control tests shall be documented and shall be available for review by the Engineer throughout the life of the contract.

As set out in these specifications, quality control sampling and testing performed by the Contractor will be used by the Department for determination of acceptability of the concrete.

The Contractor shall maintain standard equipment and qualified personnel as required to assure conformance to contract requirements.

907-804.02.12.1--Quality Control Plan. The Contractor shall prepare a Quality Control Plan which shall identify the personnel responsible for the Contractor's quality control including the company official who will act as liaison with Department personnel. The Quality Control Plan shall be submitted in writing to the Engineer for approval 30 days prior to the production of concrete.

The class(es) of concrete involved will be listed separately. If an existing mixture design(s) is to be used, the mixture design number(s) as previously approved shall be listed.

It is intended that sampling and testing be in accordance with standard methods and procedures, and that measuring and testing equipment be standard and properly calibrated. If alternative sampling methods and procedures, and inspection equipment are to be used, they shall be detailed in the Quality Control Plan.

907-804.02.12.1.1--Elements of Plan. The Plan shall address all elements that affect the quality of the structural concrete including, but not limited to, the following items:

- 1) Stockpile Management
- 2) Procedures for Corrective Actions for Non Compliance of Specifications
- 3) Procedure for Controlling Concrete Temperatures
- 4) Job Site Batch Adjustments by Addition of Chemical Admixtures:

The Plan shall address if the Contractor intends to adjust either the slump and/or total air content of a batch on the job site by adding chemical admixture(s) to a batch. The Contractor shall include the names of the personnel designated to perform this batch adjustment, the equipment used to add the chemical admixture(s), and the procedure by which the batch adjustment will be accomplished. Only the Contractor's designated personnel shall adjust a batch. Only calibrated dispensing equipment shall be used to add chemical admixture(s) to a batch. Only the procedure described in this section of the Plan shall be utilized.

If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

If the Contractor elects to utilize Job Site Batch Adjustments by Addition of Chemical Admixture within Item 2, Procedures for Corrective Actions for Non Compliance of Specifications, to adjust batches which do not meet the minimum specification requirements for slump and/or total air content, no more than three batches on any one project shall be allowed to be adjusted regardless of the number of mixtures associated with the project.

- 5) Construction of Concrete Bridge Decks, including the following:

- the description of the equipment used for placing concrete on the bridge deck in accordance with Subsection 907-804.03.6 and, as applicable, Subsections 907-804.03.7 and 907-804.03.8 including any accessories added to the pump to ensure the entrained air in the concrete mixture remains entrained during pumping and depositing of the concrete mixture,
- the description of and the number of pieces of equipment used to consolidate the concrete in accordance with Subsection 907-804.03.6.2,
- the description of the equipment used to finish the bridge deck in accordance with Subsection 907-804.03.19.7,
- the plan for ensuring a continuous rate of finishing the bridge deck without delaying the application of curing materials within the time specified in Subsection 907-804.03.17, including ensuring a continuous supply of concrete throughout the placement with an adequate quantity of concrete to complete the deck and filling diaphragms and end walls in advance of deck placement,
- the plan for applying the curing materials within the time specified in Subsection 907-804.03.17,
- the description of the powered fogging equipment in accordance with Subsection 907-804.03.17,
- a sample of the documentation used as the daily inspection report for ensuring maintenance of the continuous wet curing in accordance with Subsection 907-804.03.17, as required,
- the description of the equipment used to apply the liquid membrane, including but not limited to, the nozzles, pumping/pressurization equipment, and liquid membrane tanks, in accordance with Subsection 907-804.03.17,
- the method for determining the rate of applied liquid membrane meets the application rate requirements in accordance with Subsection 907-804.03.17,
- a sample of the documentation used for the application rate verification of the liquid membrane in accordance with Subsection 907-804.03.17.

6) Mechanical Adjustment of Trucks

907-804.02.12.2--Personnel Requirements. The Contractor's Designated Certified Technician shall perform and use quality control tests and other quality control practices to assure that delivered materials and proportioning meet the requirements of the mixture design including temperature, slump, air content, and strength and shall periodically inspect all equipment used in transporting, proportioning, and mixing.

The Contractor's Designated Technician shall periodically inspect all equipment used placing, consolidating, finishing, and curing to assure it is operating properly and that placement, consolidation, finishing, and curing conform to the mixture design and other contract requirements.

907-804.02.12.3--Documentation. The Contractor shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations made, the number and type of deficiencies found, date and time of samples taken, the quantities approved and rejected, and the nature of corrective action taken as appropriate. The Contractor's

documentation procedures will be subject to approval of the Department prior to the start of the work and to compliance checks during the progress of the work.

All conforming and non-conforming results shall be kept complete and shall be available at all times to the Department during the performance of the work. Forms shall be on a computer-acceptable medium. Batch tickets and gradation data shall be documented in accordance with Department requirements.

Batch tickets shall contain all the information in AASHTO Designation: M157, Section 16 including the additional information in Subsection 16.2 with the following exception: the information listed in paragraphs 16.2.7 and 16.2.8 is not required. All material added to a batch by both the batch plant or added manually shall be documented on the ticket. Batch tickets shall also contain the concrete producer's permanent unique mixture number assigned to the concrete mixture design. Copies shall be submitted to the Department as the work progresses.

Test data for portland cement concrete, including gradation, shall be charted in accordance with the applicable requirements.

The Contractor may use additional control charts as deemed appropriate. It is normally expected that testing and charting will be completed within 24 hours after sampling.

All records documenting the Contractor's quality control tests shall become the property of the Department upon completion of the work.

907-804.02.12.4--Corrective Action. The Contractor shall take prompt action to correct conditions that have resulted, or could result, in the submission to the Department of materials and products that do not conform to the requirements of the contract documents. All corrective actions shall be documented.

907-804.02.12.5--Non-Conforming Materials. The Contractor shall establish and maintain an effective and positive system for controlling non-conforming material, including procedures for its identification, isolation and disposition. Reclaiming or reworking of non-conforming materials shall be in accordance with procedures acceptable to the Department.

All non-conforming materials and products shall be positively identified to prevent use, shipment, and intermingling with conforming materials and products. Holding areas, mutually agreeable to the Department and the Contractor, shall be provided by the Contractor.

TABLE 4
CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL

Portland Cement Concrete		
Control Requirement	Frequency	AASHTO/ASTM Designation
A. PLANT AND TRUCKS 1. Mixer Blades 2. Scales a. Tared b. Calibrate c. Check Calibration 3. Gauges & Meters - Plant & Truck a. Calibrate b. Check Calibration 4. Admixture Dispenser a. Calibrate b. Check Operation & Calibration	Monthly Daily Every 6 months Weekly Every 6 months Weekly Every 6 months Daily	
B. AGGREGATES 1. Sampling 2. Fine Aggregate a. Gradation / FM b. Moisture c. Specific Gravity / Absorption 3. Coarse Aggregates a. Gradation b. Moisture c. Specific Gravity / Absorption	250 yd ³ concrete Check meter against test results weekly 2500 yd ³ concrete 250 yd ³ concrete Minimum of once daily or more as needed to control production. Check meter against test results weekly. 2500 yd ³ Concrete	T 2 T 27 T 255 T 84 T 27 T 255 T 85
C. PLASTIC CONCRETE 1. Sampling 2. Air Content 3. Slump 4. Compressive Strength 5. Yield 6. Temperature	First load then one per 50 yd ³ First load then one per 50 yd ³ A minimum of one set (three cylinders) for each 100 yd ³ inclusive and one set for each additional 100 yd ³ or fraction thereof for each class concrete delivered and placed on a calendar day from a single supplier. A test shall be the average of three cylinders. Each 400 yd ³ With each sample	T 141 T 152 or T 196 T 119 T 22, T 23, T 231 T 121 C 1064

907-804.02.13--Quality Assurance Sampling and Testing. Quality Assurance (QA) inspection and testing will be provided by the Department to assure that the Contractor's Quality Control (QC) testing meets the requirements of these specifications.

Acceptance of the material is based on the inspection of the construction, monitoring of the Contractor's QC program, QC and QA test results per Subsection 907-804.02.13.1, and the comparison of the QA test results with the QC test results. The Department may use the results of the Contractor's QC tests as a part of the acceptance procedures instead of the results of QA tests, provided:

- a) The Department's inspection and monitoring activities indicate that the Contractor is following the approved QC program and, respectively,
- b) For aggregates, the results from the Contractor's QC and the Department's QA testing of aggregate gradations compare by both meeting the aggregate type's gradation requirements;
- c) For concrete, the Contractor's QC and Department's QA testing of concrete compressive strengths compare when using the data comparison computer program with an alpha value of 0.01 for projects with 1000 cubic yards and more; or, strength comparisons are within 990 psi for projects of more than 200 but less than 1000 cubic yards.

The minimum frequency for QA testing of aggregate and plastic concrete by the Department will follow the frequencies listed in Table 5, "DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE".

TABLE 5
DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE

Quality Assurance Tests	Frequency	AASHTO/ASTM Designation
A. AGGREGATES		
1. Sampling		T 2
2. Fine Aggregate Gradation and FM	250 yd ³ concrete	T 27
3. Coarse Aggregates Gradation	250 yd ³ concrete	T 27
B. PLASTIC CONCRETE		
1. Sampling		T 141
2. Air Content	Every 100 yd ³	T 152 or T 196
3. Slump	Every 100 yd ³	T 119
4. Compressive Strength	One set (three cylinders) for every 100 yd ³ inclusive. A test shall be the average of three cylinders.	T 22, T 23, T 231
5. Temperature	With each sample	C 1064

Periodic inspection by the Department of the Contractor's QC testing and production will continue through the duration of the project. Weekly reviews will be made of the Contractor's QC records and charts.

For aggregates, comparison of data of the Contractor's QC aggregate gradation test results to those of the Department's QA aggregate gradation test results will be made monthly during concrete

production periods according to Department Standard Operating Procedures. When it is determined that the Contractor's QC test results of aggregate gradations are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the aggregates and the Department's QA testing frequency of aggregates may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC aggregate gradation test results fail to compare to those of the Department's QA aggregate gradation test results, Department testing for aggregate gradations will revert to the frequency shown in Table 5 for aggregates until the Contractor's and Department's aggregate gradation test data compare.

For concrete compressive strength, comparison of data of the Contractor's QC compressive strength test results to those of the Department's QA compressive strength test results will be made monthly during concrete production periods according to Department's *Concrete Field Manual*. When it is determined that the Contractor's QC test results of concrete compressive strengths are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the concrete and the Department's QA testing frequency of concrete compressive strengths may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC compressive strength test results fail to compare to those of the Department's QA compressive strength test results, Department testing will revert to the frequency shown in Table 5 for plastic concrete until the Contractor's and Department's compressive strength test data compare.

907-804.02.13.1--Job Control Testing.

907-804.02.13.1.1--Sampling. Sampling of concrete mixture shall be performed in accordance with the latest edition of the Department's *Concrete Field Manual*.

907-804.02.13.1.2--Slump. Slump of plastic concrete shall meet the requirements of Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.3--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.4--Yield. If the yield of the concrete mix design is more than plus or minus three percent ($\pm 3\%$) of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus three percent ($\pm 3\%$). If batching of the proportions of the mixture design varies outside the batching tolerance range of the originally approved proportions by more than the tolerances allowed in Subsection 907-804.02.12, the new proportions shall be field verified per Subsection 907-804.02.10.3.

907-804.02.13.1.5--Temperature. Cold weather concreting shall follow the requirements of Subsection 907-804.03.16.1. Hot weather concreting shall follow the requirements of Subsection

907-804.03.16.2. Concrete with a temperature more than the maximum allowable temperature shall be rejected and not used in Department work.

The maximum acceptance temperature for Class DS concrete mixtures is 95°F.

The maximum acceptance temperature of Class C concrete mixtures is 100°F for mixtures meeting the cement replacement requirements of Subsection 907-701.02.2. For Class C concrete mixtures that do not meet the cement replacement requirements of Subsection 907-701.02.2, the maximum acceptance temperature is 95°F.

The maximum acceptance temperature for all other concrete mixtures meeting the cement replacement requirements of Subsection 907-701.02.2 is 95°F. The maximum acceptance temperature for all other concrete mixtures which do not meet the cement replacement requirements of Subsection 907-701.02.2 is 90°F.

907-804.02.13.1.6--Compressive Strength. Standard cured concrete compressive strength tests shall conform to the specified strength (f'_c) listed in the specifications. Concrete represented by compressive strength test below the specified strength (f'_c) may be removed and replaced by the Contractor. If the Contractor elects not to remove the material, it will be evaluated by the Department as to the adequacy for the use intended. All concrete evaluated as unsatisfactory for the intended use shall be removed and replaced by the Contractor at no additional cost to the Department. For concrete allowed to remain in place, reduction in payment will be as follows:

Projects with 1000 Cubic Yards and More. When the evaluation indicates that the work may remain in place, a statistical analysis will be made of the QC and QA concrete test results. If this statistical analysis indicates at least 93% of the material would be expected to have a compressive strength equal to or greater than the specified strength (f'_c) and 99.87% of the material would be expected to have a compressive strength at least one standard deviation above the allowable design stress (f_c), the work will be accepted. If the statistical analysis indicates that either of the two criteria are not met, the Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c - (f_c + s)} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

s = standard deviation, psi*

f_c = allowable design stress, psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

* Standard deviation used in the above reduction of pay formula shall be calculated from the applicable preceding compressive strengths test results plus the individual compressive strength below f'_c . If below f'_c strengths occur during the project's first ten compressive strength tests, the standard deviation shall be calculated from the first ten compressive strength tests results.

Projects of More Than 200 but Less Than 1000 Cubic Yards. When the evaluation indicates that the work may remain in place, a percent reduction in pay will be assessed based on a comparison of the deficient 28-day test result to the specified strength. The Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

907-804.02.14--Dispute Resolution. Disputes over variations between Contractor's QC test results and the Department's QA test results shall be resolved at the lowest possible level using the latest edition of the Department's *Concrete Field Manual*. When there are significant discrepancies between the QC test results and the QA test results, the Contractor's QC Manager, the Project Engineer, and/or the District Materials Engineer shall look for differences in the procedures, and correct the inappropriate procedure before requesting a third party resolution.

If the dispute cannot be resolved at the project or District level, the Department's Materials Division will serve as a third party to resolve the dispute. The Materials Division's decision shall be binding.

The Contractor shall be responsible for the cost associated with the third party resolution if the final decision is such that the Department's QA test results were correct. Likewise, the Department will be responsible for the cost when the final decision is such that the Contractor's QC test results were correct.

907-804.03--Construction Requirements.

907-804.03.1--Measurement of Materials.

907-804.03.1.1--General. The accuracy for measuring materials shall be in accordance with AASHTO Designation: M 157.

907-804.03.1.2--Measurement by Weighing. Except when otherwise specified or authorized, the materials shall be measured by weighing. The apparatus provided for weighing materials shall be

suitably designed and constructed for this purpose. Cementitious materials and aggregates shall be weighed separately. Cement in standard bags need not be weighed, but bulk cement and other cementitious materials shall be weighed. The mixing water shall be measured by volume or by weight. All measuring devices shall be subject to approval.

907-804.03.2--Blank.

907-804.03.3--Blank.

907-804.03.4--Hand Mixing. Hand mixing of concrete will not be allowed.

907-804.03.5--Delivery. The plant supplying concrete shall have sufficient capacity and transporting apparatus to ensure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper continuity in handling, placing, and furnishing of the concrete. The rate shall be such that the interval between batches shall not exceed 20 minutes. The methods of delivering and handling the concrete shall be that which will facilitate placing with minimum re-handling and without damage to the structure or the concrete.

907-804.03.6--Handling and Placing Concrete.

907-804.03.6.1--General. Prior to placing concrete, all reinforcement shall have been accurately placed in the position shown on the plans and fastened as set out in Section 805. All sawdust, chips, and other construction debris and extraneous matter shall have been removed from the interior of the forms. Temporary struts, braces, and stays holding the forms in correct shape and alignment shall be removed when the concrete placing has reached an elevation rendering their service unnecessary. These temporary members shall be entirely removed from the forms and shall not be buried in the concrete.

No concrete shall be placed until the forms and reinforcement have been inspected.

Except as provided for truck mixers and truck agitators, concrete shall be placed in the forms within 30 minutes after the time that the cement is first added to the mixture.

Concrete shall be placed so as to avoid segregation of materials and displacement of reinforcement. The use of troughs, chutes, and pipes over 25 feet in length for gravity conveyance of concrete to the forms, will not be permitted except when authorized by the Engineer and subject to the production of quality concrete.

Only approved mechanical conveyors will be permitted.

Open troughs and chutes shall be metal or metal lined. The use of aluminum pipes, chutes, or other devices made of aluminum that come into direct contact with the concrete shall not be used. Where steep slopes are required, the chutes shall be equipped with baffles or be in short sections that change the direction of movement.

All chutes, troughs, and pipes shall be kept clean and free from coatings of hardened concrete by thoroughly flushing with water after each run. Water used for flushing shall be discharged clear of the structure.

When placing operations involve dropping the concrete more than five feet, it shall be deposited through sheet metal or other approved pipes to prevent segregation and unnecessary splashing. The pipes shall be made in sections to permit discharging and raising as the placement progresses. A non-jointed pipe may be used if sufficient openings of the proper size are provided to allow for the flow of the concrete into the shaft. As far as practicable, the pipes shall be kept full of concrete during placing, and their ends shall be kept buried in the newly placed concrete.

Except as herein provided, concrete shall be placed in horizontal layers not more than 12 inches thick. When, with the Engineer's approval, less than the complete length of a layer is placed in one operation, it shall be terminated in a vertical bulkhead. Each layer shall be placed and compacted before the preceding layer has taken its initial set and shall be compacted so as to avoid the formation of a construction joint with the preceding layer.

If the Department determines that there is an excessive number of projections, swells, ridges, depressions, waves, voids, holes, honeycombs, or other defects in the completed structure, removal of the entire structure may be required as set out in Subsection 105.12.

907-804.03.6.2--Consolidation. Immediately after depositing the concrete mixture, the concrete mixture shall be thoroughly consolidated by the use of approved mechanical vibrators and suitable spading tools. Only concrete mixture which has not achieved initial set shall be consolidated. Hand spading alone will be permitted on small structural members such as railing, small culvert headwalls, and as necessary to ensure smooth surfaces and dense concrete along form surfaces, in corners, and in locations impossible to reach with vibrators. When hand spading is used for consolidation, a sufficient number of workmen with spading tools shall be provided. For hand spading, flush a thin layer of mortar to all the surfaces and thoroughly and satisfactorily consolidate the concrete.

The Contractor shall conduct operations of depositing and consolidating the concrete mixture such that the operation produces concrete which is uniformly smooth and dense, having no honeycombing or pockets of segregated aggregate.

Movement of personnel through the consolidated concrete shall not be permitted. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.

907-804.03.6.2.1--Requirements for Vibrators. Mechanical vibrators shall be subject to the following:

1. To verify compliance with these requirements, the Contractor shall provide the Engineer with a copy of the manufacturer's specifications for each type and brand of vibrator used on the project.

2. The Contractor shall provide a sufficient number of personnel with vibrators to properly consolidate each batch immediately after the concrete is placed in the forms. The Contractor shall provide at least one stand-by vibrator and required power source.
3. Concrete having been consolidated shall not be walked in or through. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.
4. Internal vibrators shall be of the spud or tube type, meeting the following characteristics and performance:
 - a. The diameter of the head of the vibrator shall be 1¼ to 2½ inches.
 - b. The frequency of vibration shall be 8000 to 12000 vibrations per minute (Hz) while operating in the concrete.
 - c. The average amplitude shall be 0.025 to 0.05 inch while operating in air.
 - d. The minimum radius of influence shall be seven (7) inches.
 - e. The length of the vibrator head shall be nearly equal to the depth of the layer of concrete placed.
5. When the reinforcing steel is coated with epoxy, internal vibrators with heads of rubber or other resilient material shall be used. Rubber covers securely fastened over steel heads shall be acceptable.
6. For consolidation of concrete used in concrete bridge decks, the following additional requirements shall apply:
 - a. Only internal vibration shall be used.
 - b. Internal vibrators shall all be of the same type and size.
 - c. The configuration of the internal vibrators shall meet the requirements of Subsection 907-804.03.6.2.3.

907-804.03.6.2.2--Operation of Internal Vibration. Mechanical vibrators used for internal vibration shall be operated as follows:

1. Vibrators shall not be dragged or moved laterally through the concrete to transport concrete. Vibrators shall not be used in such a manner that the concrete segregates or forms pockets of grout. Vibrators shall not be applied directly or through the reinforcement to sections or layers of concrete which have taken initial set.
2. Vibrators shall only be inserted into the concrete while operating and at the point of placement to consolidate the concrete for such a length of time that there is a general cessation in the escape of large entrapped air bubbles at the surface.
3. Vibrators shall be inserted slowly into the concrete and allowed to penetrate into the concrete under their own weight.
4. Vibrators shall be inserted into the concrete while they are in a vertical position with enough flexibility to work themselves around the reinforcing steel.
5. The head of the vibrator shall be completely submerged in the concrete for a time of consolidation between 3 and 15 seconds prior to removal, unless otherwise defined by the Engineer.
6. For consolidation of two or more layers of concrete, the vibrator shall be inserted into the bottom most layer at least six (6) inches. The vibrator shall be manipulated in a series of up-and-down motions to knit the layers together.

7. Vibrators shall be removed slowly from the concrete after the consolidation has been accomplished. However, once the head of the vibrator has become only partially immersed in the concrete, vibrators shall be removed rapidly.
8. The insertions of the vibrators shall be systematically spaced such that the entire surface of the concrete comes under the influence of the vibrator during consolidation. This includes areas around the reinforcing steel, imbedded fixtures, the corners and angles of forms, and any irregular areas. The distance between insertions shall not exceed 1.5 times the radius of influence such that the area visibly affected by the vibrator overlaps the adjacent, just-vibrated area.
9. For additional information, refer to ACI 309-07, Chapter 7, Sections 7.1 through 7.3

907-804.03.6.2.3--Method of Consolidation. It is anticipated the Contractor will accomplish consolidation by internal vibration using one of the following two methods: vibrators mounted on a mechanical device or an orchestrated effort utilizing personnel. Regardless of the chosen method, the method shall be included in the QCP in accordance with Subsection 907-804.02.12.1.1.5 and shall only receive tentative approval until the method is demonstrated as effectively meeting the requirements of Subsection 907-804.03.6.2.

907-804.03.6.3--Discontinuance of Placing. When placing is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints insofar as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel. Where a "feather edge" might be produced at a construction joint, such as in the sloped top surface of a wing wall, an inset form work shall be used in the preceding layer to produce a blocked out portion that will provide an edge thickness of at least six inches (6") in the succeeding layer. Work shall not be discontinued within 18 inches of the top of any face unless provision has been made for a coping less than 18 inches thick. In this case and if permitted by the Engineer, the construction joint may be made at the underside of the coping.

Immediately following the discontinuance of placing concrete, all accumulations of mortar splashed on the reinforcement and the surface of forms shall be removed. Dried mortar chips and dust shall not be puddled into the unset concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to break or injure the concrete-steel bond at and near the surface of the concrete while cleaning the reinforcement. After initial set the forms shall not be jarred, and no strain shall be placed on the ends of projecting reinforcement until the concrete has sufficiently set to ensure against any damage by such jarring or strain.

907-804.03.6.4--Placing Bridge Concrete. The method and sequence of placing concrete shall conform to the provisions and requirements set forth for the particular type of construction.

907-804.03.6.4.1--Foundations and Substructures. Concrete seals shall be placed in accordance with Subsection 907-804.03.9. All other concrete for foundations shall be poured in the dry unless otherwise stipulated or authorization is given in writing by the Engineer to do otherwise. Concrete shall not be placed in foundations until the foundation area has been inspected and approved.

Unless otherwise specified, the placement of concrete in the substructure shall be in accordance with the general requirements of Subsection 907-804.03.6.

Unless otherwise directed, concrete in columns shall be placed in one continuous operation, and shall be allowed to set at least 12 hours before the caps are placed.

907-804.03.6.4.2--Superstructure. For simple spans, concrete shall preferably be deposited by beginning at the center of the span and working toward the ends. For continuous spans, concrete shall be deposited as shown on the plans. Concrete in girders shall be uniformly deposited for the full length of the girder and brought up evenly in horizontal layers. Concrete in areas below the bridge deck but being deposited at the same time as concrete for the bridge deck, like a diaphragm, shall be placed and consolidated sufficiently ahead of placing the concrete for the bridge deck such that the placing, consolidating, finishing, and curing of concrete for the bridge deck shall not be impeded or slowed.

Unless otherwise permitted by the Engineer, concrete shall not be placed in the superstructure until the column forms have been stripped sufficiently to determine the character of the concrete in the columns. Unless otherwise permitted by the Engineer, the load of the superstructure shall not be placed on pile bents until the caps have been in place at least seven (7) days and shall not be placed on other types of bents until the bents have been in place at least 14 days.

In placing concrete around steel shapes, it shall be placed on one side of the shape until it flushes up over the bottom flange of the shape on the opposite side, after which it shall be placed on both sides to completion.

Concrete in girder haunches less than three feet (3') in height shall be placed at the same time as that in the girder stem. Whenever a haunch or fillet has a height of three feet (3') or more at the abutment or columns, the haunch and the girder shall be poured in three successive stages: first, up to the lower side of the haunch; second, to the lower side of the girder; and third, to completion.

Except when intermediate construction joints are specified, concrete in slab, T-beam, or deck-girder spans shall be placed in one continuous operation for each span.

The floors and girders of through-girder superstructures shall be placed in one continuous operation unless otherwise specified, in which case special shear anchorage shall be provided to ensure monolithic action between girder and floor.

Concrete in box girders shall be placed as shown on the plans.

Concrete shall not be chuted directly into the forms of the span and shall be placed continuously with sufficient speed to be monolithic and to allow for finishing before initial set.

907-804.03.6.4.3--Bridge Deck. When using the Transverse Method in accordance with Subsection 907-804.03.19.7.3, the period of time between concrete placement and completion of the final curing shall be kept to a minimum, as directed by the Engineer.

907-804.03.7--Pneumatic Placing. Pneumatic placing of concrete will be permitted only if specified in the contract or if authorized by the Engineer. The equipment shall be so arranged that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by pneumatic means the equipment shall be suitable in kind and adequate in capacity for the work. The machine shall be located as close as practicable to the place of deposit. The position of the discharge end of the line shall not be more than 10 feet from the point of deposit. The discharge lines shall be horizontal or inclined upwards from the machine. At the conclusion of placement the entire equipment shall be thoroughly cleaned.

907-804.03.8--Pumping Concrete. Placement of concrete by pumping will be permitted only if specified in the contract or if authorized in writing by the Engineer. If used, the equipment shall be arranged so that no vibrations result which might damage freshly placed concrete.

Where concrete mixture is conveyed and placed by mechanically applied pressure (pumping), the equipment shall be suitable in kind and adequate in capacity for the work. The Contractor shall select concrete mixture proportions such that the concrete mixture is pumpable and placeable with the selected equipment.

The pumping equipment shall be thoroughly cleaned prior to concrete placement. Excess form release agent shall be removed from the concrete pump hopper. The Contractor shall prime the pump at no additional cost to the Department by pumping and discarding enough concrete mixture to produce a uniform mixture exiting the pump. At least 0.25 cubic yard of concrete mixture shall be pumped and discarded to prime the pump. Only concrete mixture shall be added directly into the concrete pump hopper after placement has commenced. If anything other than concrete mixture is added to the concrete pump hopper, all concrete mixture in the concrete pump hopper and pump line shall be discarded and the pump re-primed at no additional cost to the Department.

The discharge end of the pump shall be of such a configuration that the concrete does not move in the pump line under its own weight. The intent of this requirement is to ensure that entrained air in the concrete mixture remains entrained during pumping and depositing the concrete mixture. This shall be accomplished with one or both of the following:

- a minimum 10-foot flexible hose attached to the discharge end of a steel reducer having a minimum length of three (3) feet and a minimum reduction in area of 20% which is attached to the discharge end of the pump line, or
- a flexible reducing hose to the discharge end of the pumpline with a minimum reduction in area of 20% over a minimum 10-foot hose length.

Regardless of the configuration chosen, the Contractor shall ensure that the concrete is pumped and does not free-fall more than five (5) feet within the entire length of pump line and after discharge from the end of pump line.

The Contractor shall not have any type of metal elbow, metal pipe, or other metal fitting within five (5) feet of any person during discharge of concrete mixture.

Boom pumps shall have a current Concrete Pump Manufacturers Association's ASME/ANSI B30.27 certification. Equipment added to the boom and pump line shall meet the pump manufacturer's specifications and shall not exceed the manufacturer's maximum recommended weight limit for equipment added to the boom and pump line.

The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe line, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned.

The use of aluminum pipe as a conveyance for the concrete will not be permitted.

907-804.03.9--Depositing Concrete Under Water. Concrete shall not be deposited in water except with the approval of the Engineer.

Concrete deposited under water shall be Class S.

Concrete deposited under water shall be carefully placed in a compact mass in its final position by means of a tremie, a bottom dump bucket, or other approved method and shall not be disturbed after being deposited. Special care shall be exercised to maintain still water at the point of deposit. No concrete shall be placed in running water and all form work designed to retain concrete under water shall be water-tight. The consistency of the concrete shall be carefully regulated, and special care shall be exercised to prevent segregation of materials.

Concrete seals shall be placed continuously from start to finish, and the surface of the concrete shall be kept as nearly horizontal as practicable at all times. To ensure thorough bonding, each succeeding layer of a seal shall be placed before the preceding layer has taken initial set.

When a tremie is used, it shall consist of a tube having a diameter of at least 10 inches and constructed in sections having flanged couplings fitted with gaskets. The means of supporting the tremie shall be such as to permit the free movement of the discharge over the entire top surface of the work and to permit it to be lowered rapidly when necessary to choke off or retard the flow of concrete. The discharge end shall be closed at the start of the work so as to prevent water entering the tube and shall be entirely sealed. The tremie tube shall be kept full to the bottom of the hopper. When a batch is dumped into the hopper, the flow of concrete shall be induced by slightly raising the discharge end, always keeping it in the deposited concrete. The flow is then stopped by lowering the tremie. The flow shall be continuous until the work is completed.

Depositing of concrete by the drop bottom bucket method shall conform to the following: The top of the bucket shall be open. The bottom doors shall open freely downward and outward when tripped. The bucket shall be completely filled and slowly lowered to avoid backwash. It shall not be dumped until it rests on the surface upon which the concrete is to be deposited and when discharged shall be withdrawn slowly until well above the concrete.

Dewatering may proceed when the concrete seal is sufficiently hard and strong. As a general rule, this time will be 48 hours for concrete made with high-early-strength cement and three days for concrete made with other types of cement. All laitance and other unsatisfactory material shall be removed from the exposed surface by scraping, chipping, or other means which will not injure the surface of the concrete.

907-804.03.10--Construction Joints.

907-804.03.10.1--General. Unless otherwise approved by the Engineer, construction joints shall be made only where located on the plans or shown in the pouring schedule. If not detailed on the plans, or in the case of emergency, construction joints shall be placed as directed by the Engineer. Shear keys or inclined reinforcement shall be used where necessary to transmit shear or to bond the two sections together.

For continuous spans, bridge deck concrete shall be deposited as shown on the plans. Deviation from the pouring schedule shown in the plans is not permitted.

907-804.03.10.2--Bonding. Before depositing new concrete on or against concrete which has hardened, the forms shall be retightened. The surface of the hardened concrete shall be roughened as required by the Engineer and in a manner that will not leave loosened particles of aggregate or damaged concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance and saturated with water. When directed by the Engineer, the cleaned and saturated surfaces, including vertical and inclined surfaces, shall first be thoroughly covered with a coating of mortar or neat cement grout against which the new concrete shall be placed before the grout has attained its initial set.

The placing of concrete shall be carried continuously from joint to joint. The face edges of all joints which are exposed to view shall be carefully finished, true to line and elevation.

In order to bond successive courses suitable depressed or raised keys of the designated size shall be constructed. Raised keys shall be monolithic with the concrete of the lower course.

907-804.03.11--Concrete Exposed to Seawater. Unless otherwise specifically provided, concrete for structures exposed to seawater shall be Class AA concrete as referenced in Subsection 907-804.02.10. The clear distance from the face of the concrete to the nearest face of reinforcing steel shall be at least four inches. The mixing time and the water content shall be carefully controlled and regulated so as to produce concrete of maximum impermeability. The concrete shall be thoroughly compacted, and stone pockets shall be avoided. No construction joints shall be formed between the levels of extreme low water and extreme high water as determined by the Engineer. Between these levels, seawater shall not come in direct contact with the new concrete until at least 30 days have elapsed. The surface concrete as left by the forms shall be left undisturbed.

907-804.03.12--Blank.

907-804.03.13--Falsework. The Contractor shall submit to the Engineer four copies of structural design analysis and detail drawings, which show the method of falsework or centering. These designs and detail plans shall be prepared and bear the seal of a Registered Professional Engineer with experience in falsework design.

Falsework plans shall include falsework elevations together with all other dimensions and details which is considered necessary for the construction. Other pertinent data needed is size and spacing of all falsework members and minimum bearing requirements for false piles.

Upon completion of falsework erection, the Registered Professional Engineer shall certify that the erected falsework is capable of supporting the load for construction.

Falsework piling shall be spaced and driven so that the bearing value of each pile is sufficient to support the load that will be imposed upon it. The bearing value of the piles should be calculated according to the appropriate formula given in Section 803.

For designing falsework and centering, a weight of 150 pounds per cubic foot shall be assumed for green concrete. All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads without appreciable settlement or deformation. The Contractor may be required to employ screw jacks or hardwood wedges to take up slight settlement in the falsework either before or during the placing of concrete. An allowance shall be made for anticipated compressibility of falsework and for the placement of shims, wedges, or jacks to produce the permanent structural camber shown on the plans. If during construction, any weakness develops and the falsework shows any undue settlement or distortion, the work shall be stopped, the part of the structure affected removed, and the falsework strengthened before work is resumed. Falsework which cannot be founded on a satisfactory footing shall be supported on piling, which shall be spaced, driven, and removed, as referenced in Subsection 907-804.03.15, in a manner approved by the Engineer.

All structures built across a public street or highway on which maintenance of traffic is required, shall have falsework so arranged that a vertical clearance of at least 12' 6" is provided. Unless otherwise specified, a horizontal clearance of at least the width of the traveled way shall be provided at all times. If the vertical clearance is less than 13' 6" or the horizontal clearance is less than the full crown width of the roadway, the Contractor shall install and maintain appropriate safety devices, clearance signs and warning lights, and shall notify the Engineer sufficiently in advance of restricting the clearance for the Engineer to advise both the Traffic Engineering and the Maintenance Divisions. All traffic control and safety devices shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

907-804.03.14--Forms.

907-804.03.14.1--General. Forms shall be wood, metal, or other material approved by the Engineer. All forms shall be built mortar-tight and sufficiently rigid to prevent distortion due to pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the opening of joints due to shrinkage. The forms shall be substantial and unyielding and shall be so designed that the finished concrete

will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

Minimum requirements for slab overhang forms shall be 3/4-inch plywood supported on 2-inch x 6-inch S4S wood timbers placed flatwise on 16-inch centers.

Adjustable brackets for support of slab overhang forms shall be spaced at a maximum distance of 3' 0" center to center unless specifically approved otherwise. Grade points for forms shall coincide with the location of the adjustable form brackets.

Forms for surfaces exposed to view shall be of uniform thickness with a smooth inside surface of an approved type. Joints in forms for exposed surfaces shall be closely fitted to eliminate fins, stone pockets, or other variations in the surface of the concrete which would mar a smooth and uniform texture.

Forms shall be filleted at all sharp corners and shall be given a bevel or draft in the case of all projections, such as girders and copings, to ensure easy removal.

Metal ties or anchorages within the forms shall be so constructed as to permit their removal, without injury to the concrete, to a depth of at least the reinforcing steel clearance shown on the plans. In case ordinary wire ties are permitted, all wires, upon removal of the forms, shall be cut back at least 1/4 inch from the face of the concrete with chisels or nippers. Nippers shall be used for green concrete. All fittings for metal ties shall be designed so that upon their removal the cavities which are left will be the smallest practicable size. The cavities shall be filled with cement mortar and the surface left sound, smooth, even, and uniform in color.

Forms shall be set and maintained to the lines designated until the concrete is sufficiently cured for form removal. Forms shall remain in place for periods which shall be determined as hereinafter specified. If forms are deemed to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer will order the work stopped until the defects have been corrected.

The shape, strength, rigidity, water-tightness, and surface smoothness of reused forms shall be maintained at all times. Warped or bulged lumber shall be resized before being reused. Forms which are unsatisfactory in any respect shall not be reused.

Access to the lower portions of forms for narrow walls and columns shall be provided for cleaning out extraneous material immediately before placing the concrete.

All forms shall be treated with an approved oil or saturated with water immediately before placing the concrete. For rail members or other members with exposed faces, the forms shall be treated only with an approved oil to prevent the adherence of concrete. Any material which will adhere to or discolor the concrete shall not be used.

When metal forms are used they shall be kept free from rust, grease, or other foreign matter which will discolor the concrete. They shall be of sufficient thickness and so connected that they will remain true to shape and line, and shall conform in all respects as herein prescribed for mortar

tightness, filleted corners, beveled projections, etc. They shall be constructed so as to ensure easy removal without injury to concrete. All inside bolt and rivet heads shall be countersunk.

All chamfer strips shall be dressed, straight, and of uniform width and shall be maintained as such at all times.

907-804.03.14.2--Stay-In-Place Metal Forms. Stay-in-place (SIP) metal forms are corrugated metal sheets permanently installed between the supporting superstructure members. After the concrete has cured, these forms shall remain in place as permanent, non-structural members of the bridge.

Pay quantities for deck concrete will be computed from the dimensions shown in the Contract Plans with no allowance for changes in deflection and /or changes in dimensions necessary to accommodate the SIP metal forms.

There will be no direct payment for the cost of the forms and form supports, or any material, tools, equipment, or labor incidental thereto, but the cost shall be considered absorbed in the contract unit price for concrete.

Before fabricating any material, three (3) complete sets of SIP metal form shop drawings and design calculations, bearing the Design Engineer's Seal, shall be submitted to the Director of Structures, State Bridge Engineer, through the Engineer, for review. The Contractor's SIP metal form Design Engineer shall be a MS Registered Professional Engineer who is knowledgeable in the field of structural design.

In no case shall additional dead load produced by the use of SIP metal forms overstress any bridge component. Design calculations shall indicate any additional dead load from SIP metal form self-weight, form support hangers, concrete in flutes, concrete due to form deflection, etc. not included in the Contract Plans. The additional dead loads shall be clearly labeled and tabulated on the shop drawings. Bridge Division will evaluate the additional load for overstress of the bridge components. In the event that the additional dead load produces an overstress in any bridge component, Bridge Division will reject the Contractor's design. Deflection and loads produced by deflection of the SIP metal forms shall be considered and indicated in the design calculations.

The cambers and deflections provided in the Contract Plans do not consider the effects of SIP metal forms. The Contractor's Engineer shall take into account the weight of the forms and any additional dead load when developing the "Bridge Superstructure Construction Plan".

For the purpose of reducing any additional dead load produced by the SIP metal forms, the flutes of SIP metal forms may be filled with polystyrene foam. When polystyrene foam is used to fill the forms, the form flutes shall be filled completely; no portion of the polystyrene foam shall extend beyond the limits of the flutes. The Contractor shall ensure that the polystyrene foam remains in its required position within flutes during the entire concrete placement process. The Contractor shall not use reinforcing steel supports or other accessories in such a manner as to cause damage to the polystyrene foam. All damaged polystyrene foam shall be replaced to the

satisfaction of the Engineer. All welding of formwork shall be completed prior to placement of polystyrene foam.

For bridges not located in horizontal curves, the Contractor may reduce the additional dead load by matching the flute spacing with the transverse steel spacing of the bottom layer. The bottom longitudinal layer of steel shall have one (1) inch of minimum concrete cover measured from the bottom of the reinforcing to the top of the flute. The Contractor will not be allowed to vary the reinforcing steel spacing or size from the Contract Plans for the purpose of matching flute spacing.

907-804.03.14.2.1--Materials. SIP metal forms and supports shall meet the requirements of ASTM Designation: A653 having a coating designation G165. Form materials that are less than 0.03-inch uncoated thickness shall not be allowed.

907-804.03.14.2.2--Certification. The Contractor shall provide written certification from the manufacturer stating the product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.3--Polystyrene Foam. The polystyrene foam shall be comprised of expanded polystyrene manufactured from virgin resin of sufficient density to support the weight of concrete without deformation. The polystyrene foam shall be extruded to match the geometry of the flutes and provide a snug fit. The polystyrene foam shall have a density of not less than 0.8 pounds per cubic foot. The polystyrene foam shall have water absorption of less than 2.6% when tested according to ASTM Designation: C272. The Contractor shall provide written certification from the manufacturer stating the polystyrene foam product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.4--Design. The design of the SIP metal forms shall meet the following criteria.

1. The maximum self-weight of the stay in place metal forms, plus the weight of the concrete or expanded polystyrene required to fill the form flutes (where used), shall not exceed 20 psf.
2. The forms shall be designed on the basis of dead load of form, reinforcement, and plastic concrete plus 50 pounds per square foot for construction loads. The design shall use a unit working stress in the steel sheet of not more than 0.725 of the specified minimum yield strength of the material furnished, but not to exceed 36,000 psi.
3. Deflection under the weight of the forms, reinforcement, and plastic concrete shall not exceed 1/180 of the form span or 1/2 inch, whichever is less, for form spans of 10 feet or less, or 1/240 of the form span or 3/4 inch, whichever is less, for form spans greater than 10 feet.
4. The design span of the form shall equal the clear span of the form plus two (2) inches. The span shall be measure parallel to the form flutes.

5. Physical design properties shall be computed in accordance with requirements of the AISI Specifications for the Design of Cold Formed Steel Structural Members, latest published edition.
6. The design concrete cover required by the plans shall be maintained for all reinforcement.
7. The plan dimensions of both layers of primary deck reinforcement from the top surface of the concrete deck shall be maintained.
8. The SIP metal form shall not be considered as lateral bracing for compression flanges of supporting structural members.
9. SIP metal forms shall not be used under closure pours or in bays where longitudinal slab construction joints are located. SIP metal forms shall not be used under cantilevered slabs such as the overhang outside of fascia members.
10. Forms shall be secured to the supporting members by means other than welding directly to the member. Welding to the top flanges of steel stringers and/or girders shall not be allowed. Alternate installation procedures shall be submitted addressing this condition.

907-804.03.14.2.5--Construction. SIP metal form sheets shall not rest directly on the top of the stringer or floor beam flanges. Sheets shall be fastened securely to form supports, and maintain a minimum bearing length of one (1) inch at each end for metal forms. Form supports shall be placed in direct contact with the flange of the stringer or floor beam. All attachments for coated metal forms shall be made by bolts, clips, screws, or other approved means.

907-804.03.14.2.6--Form Galvanizing Repairs. Where forms or their installation are unsatisfactory in the opinion of the Engineer, either before or during placement of the concrete, the Contractor shall correct the defects before proceeding with the construction work. The cost of such corrective work shall be at the sole expense of the Contractor. Minor heat discoloration in areas of welds shall not be touched up.

907-804.03.14.2.7--Concrete. The Contractor shall ensure concrete placement does not damage the SIP metal forms. Approved pouring sequences shall be used. The completed SIP metal form system shall be sufficiently tight to prevent leakage of mortar or concrete. The concrete shall be consolidated to avoid honeycomb and voids, especially at construction joints, expansion joints, valleys, and ends of form sheets. Calcium chloride or any other admixture containing chloride salts shall not be used in the concrete.

907-804.03.14.2.8--Inspection. The Engineer will observe the Contractor's method of construction during all phases of the construction of the bridge deck slab, including the installation of the SIP metal form system; location and fastening of the reinforcement; composition of concrete items; mixing procedures, concrete placement, and vibration; and finishing of the bridge deck. Should the Engineer determine that the procedures used during the placement of the concrete warrant inspection of the underside of the deck, at least one section of the metal forms shall be removed in each span for this purpose. This shall be done as soon after placing the concrete as

practical in order to provide visual evidence that the concrete mix and the procedures are obtaining the desired results. An additional section shall be removed in any span if the Engineer determines that there has been any change in the concrete mix or in the procedures warranting additional inspection.

If, in the Engineer's judgment, inspection is needed to check for defects in the bottom of the deck or to verify soundness, the SIP metal forms shall be sounded with a hammer after the deck concrete has been in place a minimum of two days. If sounding discloses areas of doubtful soundness to the Engineer, the SIP metal forms shall be removed from such areas for visual inspection after the concrete has attained adequate strength. The SIP metal bridge deck forms shall be removed at no expense to the State.

At locations where sections of the metal forms have been removed, the Engineer will not require the Contractor to replace the metal forms. The adjacent metal forms and supports shall be repaired to present a neat appearance and to ensure their satisfactory retention. As soon as the form is removed, the Engineer will examine the concrete surfaces for cavities, honeycombing, and other defects. If irregularities are found and the Engineer determines that these irregularities do not justify rejection of the work, the concrete shall be repaired as directed by the Engineer. If the Engineer determines that the concrete where the form is removed is unsatisfactory, additional metal forms as necessary shall be removed to inspect and repair the slab, and the Contractor's method of construction shall be modified as required to obtain satisfactory concrete in the slab. All unsatisfactory concrete shall be removed and replaced as directed at no expense to the State.

If the method of construction and the results of the inspections as outlined above indicate that sound concrete has been obtained throughout the slabs, the amount of sounding and form removal may be reduced when approved by the Engineer.

The Contractor shall provide a safe and convenient means of conducting of the inspection.

907-804.03.15--Removal of Falsework, Forms, and Housing. In the determination of the time for the removal of falsework, forms, and housing and the discontinuance of heating, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete, and the materials used in the mix. No forms or supports shall be removed prior to approval by the Engineer. During cold weather, removal of housing and the discontinuance of heating shall be in accordance with Subsection 907-804.03.16.1.

Concrete in the last pour of a continuous superstructure shall have attained a compressive strength of 2,400 psi, as determined by cylinder tests or maturity meter probe, prior to striking any falsework. It is important that falsework be removed as evenly as possible to prevent excessive deflection stresses in the spans.

At the Contractor's option and with the approval of the Engineer, the time for removal of forms may be determined by cylinder tests, in accordance with the requirements listed in Table 6, in which case the Contractor shall furnish facilities for testing the cylinders. The facilities shall include an approved concrete testing machine of sufficient capacity and calibrated by an acceptable commercial laboratory. Tests shall be conducted in the presence of a Department representative

to witness and record strengths obtained on each break or performed by a Department certified technician in an approved testing laboratory.

[a1]The cylinders shall be cured under conditions which are not more favorable than those existing for the portions of the structure which they represent.

Table 6
Minimum Compressive Strength Requirements for Form Removal

Forms:

Columns	1000 psi
Side of Beams	1000 psi
Walls not under pressure	1000 psi
Floor Slabs, overhead	2000 psi
Floor Slabs, between beams	2000 psi
Slab Spans	2400 psi
Other Parts	1000 psi

Centering:

Under Beams	2400 psi
Under Bent Caps	2000 psi

Limitation for Placing Beams on:

Pile Bents, pile under beam	2000 psi
Frame Bents, two or more columns	2200 psi
Frame Bents, single column	2400 psi

For bridges, non-SIP metal forms for bridge deck slabs overhead and bridge deck slabs between beams shall be removed with the approval of the Engineer, between two weeks and four weeks after the removal of the wet burlap applied in accordance with Subsection 907-804.03.17.1, or application of liquid membrane applied in accordance with Subsection 907-804.03.17.2.

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. Falsework, forms, and housings may be removed when maturity meter readings indicate that the required concrete strength is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

Table 7
Requirements for use of Maturity Meter Probes

Structure Component	Quantity of Concrete	No. of Probes
Slabs, beams, walls, & miscellaneous items	0 - 30 yd ³	2
	> 30 to 60 yd ³	3
	> 60 to 90 yd ³	4
	> 90 yd ³	5
Footings, Columns & Caps	0 - 13 yd ³	2
	> 13 yd ³	3
Pavement, Pavement Overlays	1200 yd ²	2
Pavement Repairs	Per repair or 900 yd ² Whichever is smaller	2

Methods of form removal likely to cause overstressing of the concrete shall not be used. Forms and supports shall be removed in a manner that will permit the concrete to uniformly and gradually take the stresses due to its own weight. Centers shall be gradually and uniformly lowered in a manner that will avoid injurious stresses in any part of the structure.

As soon as concrete for railings, ornamental work, parapets and vertical faces which require a rubbed finish has attained a safe strength, the forms shall be carefully removed without marring the surfaces and corners, the required finishing performed, and the required curing continued.

Prior to final inspection of the work, the Contractor shall remove all falsework, forms, excavated material or other material placed in the stream channel during construction. Falsework piles may be cut or broken off at least one foot below the mudline or ground line unless the plans specifically indicate that they are to be pulled and completely removed from the channel.

907-804.03.16--Cold or Hot Weather Concreting.

907-804.03.16.1--Cold Weather Concreting. In cold weather, the temperature of the concrete when delivered to the job site shall conform to the temperature limitations of "Temperature Limitations on Concrete when Delivered to Job Site" listed in Table 8 below. Cold weather is defined as three consecutive days when there is a probability that the daily average of the highest and lowest ambient temperatures is expected to be less than 40°F. This three-day forecast shall be based on the latest information available from the National Weather Service.

When the Contractor proposes to place concrete during seasons when there is a probability of ambient temperatures lower than 40°F, the Contractor shall have available on the project the approved facilities necessary to enclose uncured concrete and to keep the temperature of the air inside the enclosure within the ranges and for the minimum periods specified herein.

When there are indications of temperatures of less than 40°F during the first four days after placement of the concrete, the concrete shall be protected from cold temperatures by maintaining a temperature between 50°F and 100°F for at least four days after placement and between 40°F and 100°F for at least three additional days. The Contractor shall use such heating equipment such as stoves, salamanders, or steam equipment as deemed necessary to protect the concrete. When dry heat is used, means of maintaining atmospheric moisture shall be provided.

At the option of the Contractor with the approval of the Engineer, when concrete is placed during cold weather and there is a probability of ambient temperatures lower than 40°F, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. An approved insulating blanketing material shall be used to protect the work when ambient temperatures are less than 40°F and shall remain in place until the required concrete strength in Table 6 is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

One or more of the aggregates and/or mixing water may be heated. The aggregates may be heated by steam, dry heat, or by placing in the mixing water which has been heated. Frozen aggregates shall not be used. When either aggregates or water are heated above 100°F, the aggregates and water shall be combined first in the mixer before the cement is added to avoid flash set. Cement shall not be mixed with water or with a mixture of water and aggregate having a temperature greater than 100°F.

The use of salt or other chemical admixtures in lieu of heating will not be permitted.

Before placing concrete, all ice or frost shall be removed from the forms and reinforcement.

In the case of concrete placed directly on or in the ground, such as for footings or bottom slabs, protection and curing during cold weather may be provided as set for concrete pavement under Subsection 501.03.20.3.

The Contractor shall assume all risk and added cost connected with the placing and protecting of concrete during cold weather. Permission given by the Engineer to place concrete during such time will in no way relieve the Contractor of responsibility for satisfactory results. Should it be determined at any time that the concrete placed under such conditions is unsatisfactory, it shall be removed and replaced with satisfactory concrete by the Contractor without extra compensation.

TABLE 8
COLD WEATHER TEMPERATURE LIMITATIONS ON CONCRETE WHEN
DELIVERED TO JOB SITE

Section thickness in the least dimension inches	Jobsite Acceptance Temperature Range °F
Less than 12	55 to 75
12 to 36	50 to 70
36 to 72	45 to 65
Greater than 72	40 to 60

907-804.03.16.2--Hot Weather Concreting. The manufacture, placement, and protection of concrete during hot weather requires special attention to ensure that uniform slump ranges and satisfactory placement qualities are maintained, that surface cracking is held to a minimum, and that design strengths are produced.

When the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods.

When the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

907-804.03.17--Curing Concrete. Curing is defined as all actions taken to ensure the moisture and temperature conditions of freshly placed concrete exist so the concrete may develop its potential properties. Curing shall take place from the time of placement until its potential properties have developed. The Contractor shall use the guidance in ACI 308R-01 to:

- a) cure the concrete in such a manner as to prevent premature moisture loss from the concrete,
- b) supply additional moisture to the concrete as required in order to ensure sufficient moisture within the concrete, and
- c) maintain a concrete temperature beneficial to the concrete.

Curing in accordance with the requirements in either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall be completely established within 20 minutes after finishing, except as noted for bridge decks. Finishing is complete when the pan drag, burlap drag, or other finishing method is complete.

When stay-in-place (SIP) metal forms are used in accordance with Subsection 907-804.03.14.2 in conjunction with the Transverse Method in accordance with Subsection 804.03.19.7.3, if the concrete mixture contains lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 and an internal curing water content of 8.0 pounds or greater per 100 pounds of total cementitious materials, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2. The minimum amount of LWA shall be established following the information in the Department's *Concrete Field Manual*, Paragraph 5.5.5. If the concrete mixture does not meet or exceed this internal curing water content, curing shall be accomplished in accordance with Subsection 907-804.03.17.1.

When SIP metal forms are not used or used in conjunction with the Longitudinal Method in accordance with Subsection 804.03.19.7.2, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2.

The length of time for curing shall be maintained in accordance with either of the following:

- 1. Prescribed Length of Time:**

- a) Curing following the requirements of Subsection 907-804.03.17.1 shall continue uninterrupted for at least 14 days.
- b) Curing following the requirements of Subsection 907-804.03.17.2 shall continue uninterrupted for at least 10 days.

OR

2. Length of Time Defined by Development of Compressive Strength:

Curing following the application requirements of Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall continue uninterrupted for each day's production until the compressive strength of the concrete exceeds 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Therefore, if an area is being cured in accordance with Subsection 907-804.03.17.1, the curing by wet burlap shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Likewise, if an area is being cured in accordance with Subsection 907-804.03.17.2, the curing by liquid membrane shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1.

The compressive strength of the concrete may be determined by the use of maturity meter in accordance with Subsection 907-804.03.15.

907-804.03.17.1--Water With Waterproof Cover. All burlap shall be completely saturated and wet prior to placing it on the concrete. The burlap shall have been fully soaked in water for a minimum of 12 hours prior to placement on the concrete.

For bridge decks, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of the initial strike-off for bridges without a skew and 25 minutes of the initial strike-off for bridges with a skew. For all other concrete, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of completing finishing.

For bridge decks, following the first layer of burlap, the Contractor shall apply a second layer of saturated burlap within five (5) minutes of applying the first layer.

The applied burlap shall completely cover all exposed concrete surfaces. In areas where the burlap may not be directly applied due to the concrete surface, for example, in areas where reinforcing steel protrudes thru the concrete surface, like in the areas of a bridge deck where the bridge railing will be constructed at a later time, the saturated burlap shall be draped over the steel. The concrete surface shall not be allowed to dry after strike-off or at any time during the curing period.

The Contractor shall maintain the burlap in a fully wet condition using powered fogging equipment capable of producing a fog spray of atomized droplets of water until the concrete has gained sufficient strength to allow foot traffic without the foot traffic marring the surface of the concrete. Burlap shall not be maintained in the fully wet condition using equipment which does not produce a fog spray of atomized droplets of water or by use of manually pressurized sprayers.

For bridge decks, once the concrete has gained sufficient strength to allow foot traffic which does not mar the surface of the concrete, soaker hoses shall be placed on the burlap. The soaker hoses shall then be supplied with running water continuously to maintain continuous saturation of all burlap and the entire concrete surface.

If there is a delay in the placement of the first layer of saturated burlap outside the time limit, the struck-off and finished concrete shall be kept wet by use of the powered fogging equipment used to keep the burlap wet.

White polyethylene sheets shall be placed on top of the wet burlap and, as applicable, soaker hoses, covering the entire concrete surface as soon as practical and not more than 12 hours after the placement of the concrete. White polyethylene sheets of the widest practical width shall be used, overlapping adjacent sheets a minimum of six inches (6") and tightly sealed with an adhesive like pressure sensitive tape, mastic, glue, or other approved methods to form a complete waterproof cover of the entire concrete surface. White polyethylene sheets which overlap a minimum of two feet (2') may be held in place using means other than an adhesive. The white polyethylene sheets shall be secured so that wind will not displace them. The Contractor shall immediately repair the broken or damaged portions or replace sections that have lost their waterproof qualities.

If burlap and/or white polyethylene sheets are temporarily removed for any reason during the curing period, the Contractor shall keep the entire exposed area continuously wet. The saturated burlap and white polyethylene sheets shall be replaced, resuming the specified curing conditions, as soon as possible.

The Contractor shall inspect the bridge deck surface once every eight (8) hours for the entirety of the curing period, so that all areas remain wet for the entire curing period and all curing requirements are satisfied and document the inspection in accordance with Subsection 907-804.03.17.1.1.

At the end of the curing period, one coating of liquid membrane shall be applied following the requirements of Subsection 907-804.03.17.1.2. The purpose of the coating of liquid membrane is to allow for slow drying of the concrete. The application of liquid membrane to any area shall be complete within 30 minutes of the beginning of removal of the white polyethylene sheets, soaker hoses, and burlap from this area.

907-804.03.17.1.1--Documentation for Bridge Decks. The Contractor shall provide the Engineer with a daily inspection report that includes:

- documentation that identifies any deficiencies found (including location of deficiency);
- documentation of corrective measures taken;
- a statement of certification that all areas are wet and all curing material is in place on the entire bridge deck;
- documentation showing the time and date of all inspections and the inspector's signature;
- documentation of any temporary removal of curing materials including location, date and time, length of time curing was removed, and means taken to ensure exposed area was kept continuously wet.

907-804.03.17.1.2--Liquid Membrane. At the end of the 14-day wet curing period the wet burlap and polyethylene sheets shall be removed and within 30 minutes, the Contractor shall apply white liquid membrane to the deck. The liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The application of liquid membrane shall be accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first application of liquid membrane.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The coating shall be protected against marring for at least seven (7) days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

The 7-day period during which the liquid membrane is applied and protected shall not be reduced even if the period of wet curing is extended past the required 14 days.

907-804.03.17.1.2.1--Liquid Membrane Documentation. The Contractor shall make available to the Engineer an application rate verification method and any information necessary during application of the liquid membrane to verify that the rate of application meets the prescribed rate for the various surfaces of the concrete, including, but not limited to, the top surface of the bridge deck and exposed sides of the bridge deck after any forms are removed. The Contractor shall submit this application verification method to the Engineer in accordance with Subsection 907-804.02.12.1.1.

One method of verifying the rate of application is as follows:

1. Determine the volume of liquid membrane in the container. For a container with a uniform cross-sectional area, for example a 55-gallon drum, determine the area of the cross-section. Determine the height of the surface of the liquid membrane from the bottom of the container. This may be accomplished by inserting a sufficiently long, clean dip-stick parallel with the axis of the container into the liquid membrane until the inserted end of the dip-stick contacts the bottom of the container. On removing the dip-stick, measure the length from the end which was inserted to the point on the dip-stick where the liquid membrane ceases to coat the dip-stick. Multiply the area of the cross-section by the height of the level of liquid membrane, maintaining consistent units, to determine the volume.
2. Perform step 1 prior to beginning applying the liquid membrane to establish the initial volume.
3. During the period of application, perform step 1 each 100 square feet of bridge deck.
4. In order to meet the required application rate of one (1) gallon per 200 square feet, the amount in the container shall be at least 0.5 gallon less than the previous volume in the previous 100 square feet. Other changes in volume may apply depending on the manufacturer's recommended application rate.
5. Additional applications to an area shall be applied until the required rate is satisfied. Areas which are not visually satisfactory to the Engineer shall have additional liquid membrane applied as directed by the Engineer.

The amount of liquid membrane applied shall be determined each day using the application verification method. This information shall be submitted to the Engineer within 24 hours of applying the liquid membrane.

907-804.03.17.2--Liquid Membrane Method. All surfaces on which curing is to be by liquid membrane shall be given the required surface finish prior to the application of liquid membrane. Concrete surfaces cured by liquid membrane shall receive two applications of white liquid membrane. Neither application shall be made from a position supported by or in contact with the freshly placed concrete. Both applications shall be applied perpendicularly to the surface of the concrete.

When using liquid membrane, the liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The application of liquid membrane shall be accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first two applications of liquid membrane.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The first application of the liquid membrane shall be made as the work progresses. For bridge decks, the first application shall be completed in each area of the deck, including the area in which the bridge railing will be later constructed, within 20 minutes of initial strike-off for bridges with no skew and within 25 minutes of initial strike-off for bridges with skew. For all other concrete, the first application of the liquid membrane shall be completed within 20 minutes of finishing.

The second application shall be applied within 30 minutes after the first application. The liquid membrane shall be uniformly applied to all exposed concrete surfaces.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The Contractor shall make available to the Engineer an application rate verification in accordance with Subsection 907-804.03.17.1.2.1.

The coating shall be protected against marring for at least 10 days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

After the specified time for curing, but prior to constructing the bridge railing, all liquid membrane shall be removed from both the exposed surfaces of the reinforcing steel and the concrete surfaces on which bridge rail will be constructed. This removal of liquid membrane may be accomplished by high pressure washing or other methods approved by the Engineer.

907-804.03.18--Expansion and Fixed Joints, Bearings, Anchor Bolts, Plates, Castings, Pipes, Drains, Conduits, Etc. All joints shall be constructed according to details shown on the plans. The edges of the concrete at open or filled joints shall be chamfered or edged as indicated on the plans.

907-804.03.18.1--Open Joints. Open joints shall be placed in the locations shown on the plans and shall be constructed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material. The insertion and removal of the template shall be accomplished without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint unless so specified on the plans.

907-804.03.18.2--Filled Joints. Poured expansion joints and joints to be sealed with premolded materials shall be constructed similar to open joints. When premolded types are specified, the filler shall be placed in correct position as the concrete on one side of the joint is placed. When

the form is removed, the concrete on the other side shall be placed. Adequate water stops of metal, rubber, or plastic shall be carefully placed as shown on the plans.

907-804.03.18.3--Premolded and Preformed Joint Seals. When preformed elastomeric compressive joint seals are specified, the previously formed and cured open joint shall be thoroughly cleaned of all foreign matter, the required adhesive uniformly applied, and the seal installed in accordance with the recommendations of the manufacturer of the seal.

When premolded filler is used for the joints in the roadway slab, the tops shall be adequately sealed with poured joint filler in accordance with details on the plans. Premolded filler shall be permanently fastened to an adjacent concrete surface by appropriate use of copper wire, copper nails, or galvanized nails.

907-804.03.18.4--Steel Joints. The plates, angles, or other structural shapes shall be accurately shaped at the shop to conform to the section of the concrete floor. Fabrication and painting shall conform to the specifications covering those items. When called for on the plans or in the special provisions, the material shall be galvanized in lieu of painting. Care shall be taken to ensure that the surface in the finished plane is true and free of warping. Positive methods shall be employed in placing the joints to keep them in correct position during the placing of the concrete. The opening at expansion joints shall be that designated on the plans at normal temperature, and care shall be taken to avoid impairment of the clearance in any manner.

907-804.03.18.5--Water Stops. Adequate water stops of metal, rubber, or plastic shall be placed as shown on the plans. Where movement at the joint is provided for, the water stops shall be of a type permitting movement without injury. They shall be spliced, welded, or soldered to form continuous watertight joints.

907-804.03.18.6--Bearing Devices. Bearing plates, rockers, and other bearing devices shall be constructed according to details shown on the plans. Unless otherwise specified or set in plastic concrete, they shall be set in grout to insure uniform bearing. Structural steel and painting shall conform to the requirements of Sections 810 and 814. When specified, the material shall be galvanized in lieu of painting. The rockers or other expansion bearing devices shall be set, considering the temperature at the time of erection, so that the required position of the device is provided.

At all points of bearing contact, concrete members shall be separated from underlying members by dimensioned bearing pads or by methods and/or materials specified on the plans.

When not otherwise specifically provided, contact areas between concrete super-structures and substructures shall be separated by three layers of No. 15, Type I, roofing felt.

907-804.03.18.7--Friction Joints. Metal friction joints shall consist of plates as indicated on the plans and shall be securely anchored in correct position. All sliding surfaces shall be thoroughly coated with an approved graphite grease. Movement shall not be impeded by the concrete in which the plates are embedded.

907-804.03.18.8--Placing Anchor Bolts, Plates, Castings, Grillage, Conduits, Etc. All anchor bolts, plates, castings, grillage, conduits, etc. indicated on the plans to be placed in or on the concrete shall be placed, set, or embedded as indicated or as directed. These items of the construction shall be set in portland cement mortar as referenced in Subsection 714.11.5, except that anchor bolts may, as permitted by the Engineer, be built into the masonry, set in drilled holes, or placed as the concrete is being constructed by inserting encasing pipe or oiled wooden forms of sufficient size to allow for adjustment of the bolts. After removal of the pipe or forms, the space around the bolts shall be filled with portland cement mortar completely filling the holes. The bolt shall be set accurately and perpendicular to the plane of the seat.

Anchor bolts which are to be set in the masonry prior to the erection of the superstructure shall be carefully set to proper location and elevation with a template or by other suitable means.

When bed plates are set in mortar, no superstructure or other load shall be placed thereon until this mortar has been allowed to set for a period of at least 96 hours, subject to the restrictions for cold weather concreting in Subsection 907-804.03.16.1. The mortar shall be kept well moistened during this period.

Weep hole drains shall be installed in abutments and retaining walls, and roadway drains or scuppers shall be installed in the roadway slabs in accordance with the details shown on the plans.

Where backfill is to be made at weep holes or openings in the structure, sand or stone chimneys or French drains shall be constructed as specified and shall extend through the portion of the backfill to be drained. Except as otherwise provided, the sand, stone, or slag used in this construction shall meet the requirements of Subsection 704.04.

907-804.03.19--Finishing Concrete Surfaces.

804.03.19.1--Classes of Finishes. Surface finishes of exposed concrete surfaces shall be classified as follows:

- Class 1 - Ordinary Surface Finish
- Class 2 - Rubbed or spray Finish
- Class 3 - Tooled Finish
- Class 4 - Sand-Blast Finish
- Class 5 - Wirebrush or Scrubbed Finish
- Class 6 - Floated Surface Finish

907-804.03.19.2--Class 1, Ordinary Surface Finish. Immediately following the removal of forms, all fins and irregular projections shall be removed from all surfaces except from those which are not to be exposed or not to be waterproofed. On all surfaces, the cavities produced by form ties and all other holes, honeycomb spots, broken corners or edges, and other defects shall be thoroughly cleaned, and after having been kept saturated with water for at least three hours shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportions used in the class of the concrete being finished. Mortar used in pointing shall be not more than one hour old. The mortar patches shall be cured as specified under Subsection 907-804.03.17. All

construction and expansion joints shall be left carefully tooled and free of mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges.

The resulting surfaces shall be true and uniform. All surfaces which cannot be repaired to the satisfaction of the Engineer shall be given a Class 2 rubbed finish.

907-804.03.19.3--Class 2, Rubbed or Spray Finish.

907-804.03.19.3.1--Rubbed Finish. After removal of forms, the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as its condition will permit. Immediately before starting this work, the concrete shall be kept thoroughly saturated with water for at least three hours. Surfaces shall be rubbed with a medium course Carborundum stone using a small amount of mortar on its face. The mortar shall be composed of cement and sand mixed in the proportions used in the concrete being finished. Rubbing shall be continued until all form marks, projections, and irregularities have been removed, all voids are filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this time.

After all concrete above the surface being treated has been cast, the final finish shall be obtained by rubbing with a fine Carborundum stone and water. This rubbing shall continue until the entire surface is of a smooth texture and uniform color.

After the final rubbing is completed and the surface has dried, it shall be rubbed with burlap to remove loose powder and objectionable marks.

907-804.03.19.3.2--Spray Finish. Prior to the spray finish, the concrete shall be given a Class 1 finish in accordance with Subsection 907-804.03.19.2, supplemented if necessary with a grout meeting the requirements of Subsection 714.11 with fine aggregate modified to require 100 percent passing the No. 16 Sieve.

Grout shall be applied with burlap pads or float sponges, and as soon as the grout has dried the surface shall be brushed to remove all loose grout and the surface left smooth and free of air holes. Surfaces to be sprayed shall be free of efflorescence, flaking coatings, dirt, oil, and other foreign substances. Prior to application of the spray finish, the surfaces shall be free of moisture, as determined by sight and touch, and in a condition consistent with the manufacturer's published recommendations.

The spray finish material shall meet the requirements of Subsection 714.12 and shall be listed on of Approved Sources of Materials. The spray finish shall be applied with heavy duty spray equipment capable of maintaining a constant pressure as necessary for proper application. The material shall be applied as recommended by the manufacturer except the rate of application shall not be less than one gallon per 50 square feet of surface area without prior written approval of the Engineer.

The completed finish shall be tightly bonded to the structure and present a uniform appearance and texture equal to or better than a rubbed finish. If necessary, additional coats shall be sprayed to produce the desired surface texture and uniformity. Upon failure to adhere positively to the

structure without chipping or cracking or to attain the desired surface appearance, the coatings shall be completely removed and the surface given a rubbed finish in accordance with 907-804.03.19.3.1, or other approved methods shall be used to obtain the desired surface finish to the satisfaction of the Engineer without additional cost to the State.

907-804.03.19.4--Classes 3, 4, and 5 Finishes. If required, specifications for these finishes will be contained in the special provisions.

907-804.03.19.5--Class 6, Floated Surface Finish. After the concrete has been deposited in place, it shall be consolidated and the surface shall be struck off by means of a strike board and floated with a wooden or cork float. An edging tool shall be used on edges and expansion joints. The surface shall not vary more than 1/8 inch under a 10-foot straightedge. The surface shall have a granular or matte texture which will not be slick when wet.

907-804.03.19.6--Required Finishes for Various Surfaces.

907-804.03.19.6.1--General. Unless otherwise specified, the top surface of sidewalks, the top horizontal surfaces of footings, and top slabs of box bridges, box culverts, or other structures shall be given a Class 6 finish. All formed concrete surfaces shall be given a Class 1 finish, except on surfaces which are completely enclosed, such as the inside surfaces of cells of box girders, the removal of fins and form marks and the rubbing of mortared surfaces to a uniform color will not be required.

In reference to finishing, exposed surfaces are surfaces or faces which may be seen after all backfill has been placed. Exposed surfaces requiring a Class 2 finish shall be finished at least one foot below the ground line or the low water elevation, whichever is higher.

The Class 2 finish shall be made upon a Class 1 finish. After the removal of forms the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as the condition of the concrete will permit.

Bridge floors shall be finished in accordance with Subsection 907-804.03.19.7.

907-804.03.19.6.2--Finishing Formed Concrete Surfaces of Box Bridges, Box Culverts, Pipe Headwalls, and Minor Structures. The exposed surfaces of wing walls and parapets of box bridges and box culverts to be used as vehicular or pedestrian underpasses shall be given a Class 2 finish. Exposed surfaces of other box culverts or box bridges, pipe culvert headwalls, and other minor structures shall be given a Class 1 finish unless otherwise indicated on the plans.

The exposed surfaces of retaining walls including copings and parapets shall receive a Class 2 finish.

907-804.03.19.6.3--Finishing Formed Concrete Surface of Bridges. All formed concrete bridge surfaces which are exposed shall have a Class 1 or 2 finish as set forth herein unless designated otherwise on the plans.

Bridges with designated surfaces for Class 2 finish are classified as follows:

- Group A - Bridges over highways, roads and streets.
- Group B - Bridges over waterways and railroads.
- Group BB - Twin or adjacent bridges of Group B category.

When a Group B or BB bridge also spans a highway, road or street, exposed concrete surfaces shall be finished in accordance with Group A requirements.

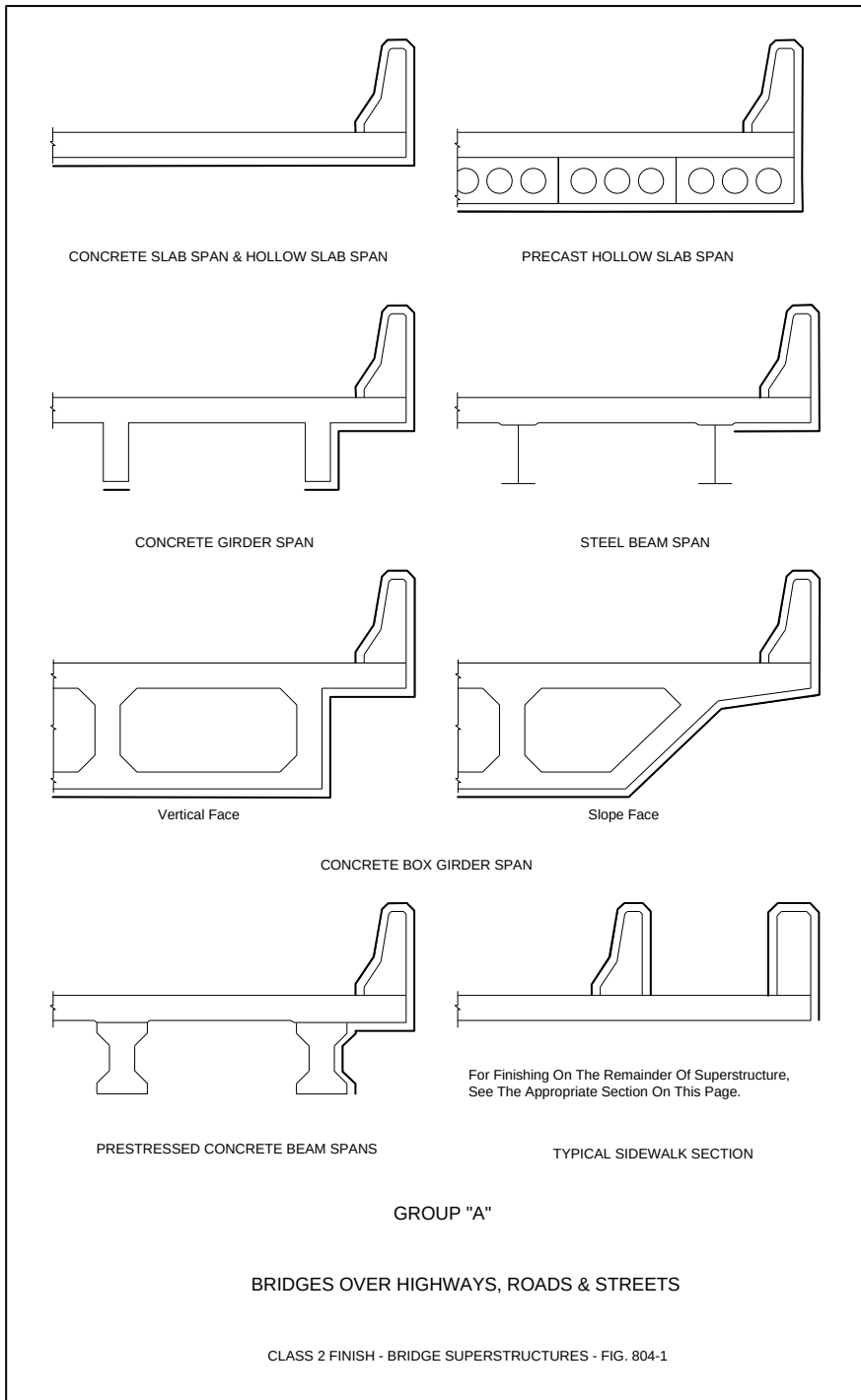
(A) Superstructures. Concrete surfaces to be given a Class 2 finish shall be the exposed surfaces of wings and rails and other exposed surfaces indicated by a double line in Figures 804-1, 804-2, and 804-3.

When a Group B or BB also spans a highway, road or street, the superstructure of spans over and extending one span in each direction beyond the lower level highway, road or street shall be given a Class 2 finish as shown for Group A.

(B) Substructures. Concrete surfaces to be given a Class 2 finish are as follows:

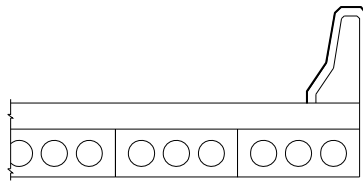
Group A. Exposed surfaces of abutments, end bents, end bent posts, wing walls, railing, retaining walls, parapets, copings, piers, columns, piles, caps, struts or walls between columns or piles, encasement of steel piles, arch rings and spandrel walls.

Group B and BB. Exposed surfaces of abutments, wing walls, end bent posts, railing, retaining walls, parapets and copings.

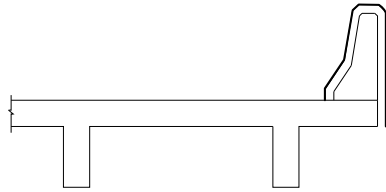




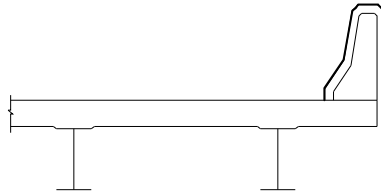
CONCRETE SLAB SPAN & HOLLOW SLAB SPAN



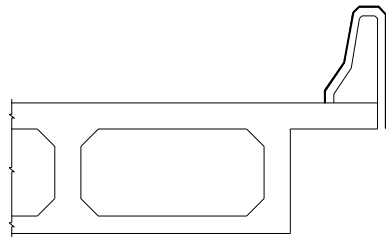
PRECAST HOLLOW SLAB SPAN



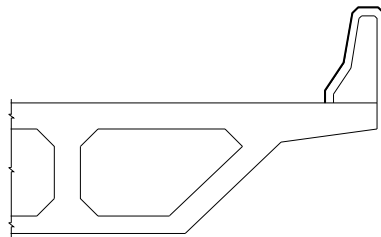
CONCRETE GIRDER SPAN



STEEL BEAM SPAN

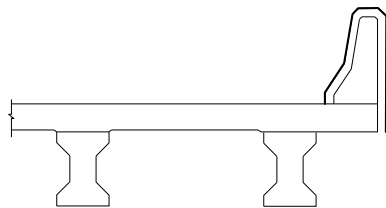


Vertical Face

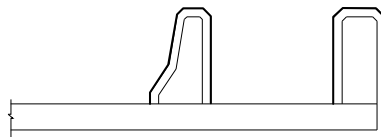


Slope Face

CONCRETE BOX GIRDER SPAN



PRESTRESSED CONCRETE BEAM SPANS

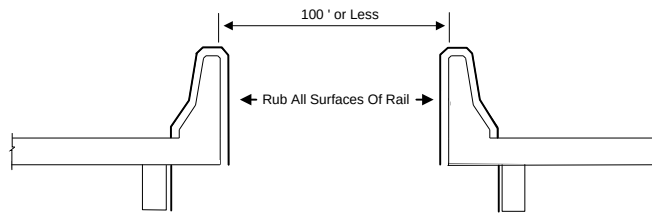


For Finishing On The Remainder Of Superstructure,
See The Appropriate Section On This Page.

TYPICAL SIDEWALK SECTION

GROUP "B"

BRIDGES OVER WATERWAYS AND BRIDGES OVER RAILROAD TRACKS



GROUP "B B" - ADJACENT BRIDGES

GROUP "B B"

TWIN or DUAL BRIDGES

CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-3

907-804.03.19.7--Finishing Bridge Decks.

907-804.03.19.7.1--General. Concrete bridge decks shall be struck off and finished by the method(s) designated on the plans.

In the event a method is not designated, the Contractor may use either the longitudinal or transverse method subject to the requirements contained in these specifications.

Except when indicated otherwise on the plans, the finish of the bridge deck shall be either a belt finish, a broom finish, or one of the following drag methods: pan, double pan, burlap, or pan and burlap. Manual finishing of the bridge deck shall be performed only in areas inaccessible by the finishing equipment mounted to the strike-off screed, but shall not hinder the requirements for curing in accordance with Subsection 907-804.03.17.1. The surface texture specified and surface requirements shall be in accordance with the applicable requirements of Subsections 501.03.17 and 501.03.18 modified only as the Engineer deems necessary for bridge deck construction operations.

At no time shall water on the surface of the concrete from bleeding, fogging, curing, or other sources be worked into the concrete or used as an aid for finishing.

Regardless of the method of finishing selected, requirements for curing per Subsection 907-804.03.17 shall be completed within the specified time limits. If the requirements in Subsection 907-804.03.17 are not completed within the specific time limits, the Contractor shall cease operations, revise his operations up to and including acquiring new or additional equipment or additional personnel in order to satisfy the requirements in Subsection 907-804.03.17, and, on approval from the Engineer, resume operations

907-804.03.19.7.2--Longitudinal Method. The longitudinal method may be used for repairs to bridge decks or bridge widening projects. For bridge widening projects, curing in accordance with Subsections 907-804.03.17 shall be completed within 30 minutes of initial strike-off for bridges without skew and within 35 minutes of initial strike-off for bridges with skew.

The longitudinal method requires that the strike-off screed be supported on accurately graded and supported bulkheads or templates placed across the full width at the end(s) of the pour. Before the concrete is placed, approved fixed templates or wooden bulkheads of not less than 1¼-inch lumber shall be placed perpendicular to the centerline of the roadway, or in the case of skew bridges at the angle of skew. At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed to assure the specified clearance to the reinforcing steel. The upper surface of the template or bulkheads shall be accurately set to conform to the required grade and crown.

Special attention shall be given to the gutter lines where the strike-off screed cannot reach. The gutters shall be finished by hand and tested with the straight edge. Floor drains shall be set lower than the finished gutter line and finished over. After initial set, the concrete shall be dished out and finished around the drains to form an outlet.

After the concrete has been deposited and rough graded, it shall be struck off by means of a strike-off screed resting on the bulkheads or fixed templates. The strike-off screed shall be of a type satisfactory to the Engineer and shall have sufficient strength to retain its shape under all working conditions. The final surface shall comply with the applicable requirements of Subsections 501.03.17.6 and 501.03.18, and unless otherwise specified in the contract, the final finish under this method shall be the belt finish.

In general, the overall strike-off screed should be trussed, with bracing heavy enough to support the weight of a man without deflecting, and should be adjustable for camber and correction of sag.

The strike-off screed will ride on the bulkheads or fixed templates at the ends of the section being finished. Care shall be taken to see that the bulkhead or fixed template elevations are accurately set since the entire span surface will be controlled by them. The manipulation of the screed shall be such that neither end is raised from the bulkheads or templates during the process.

The concrete shall be struck off by beginning at one curb and proceeding entirely across the span. A slight excess of concrete shall be kept in front of the cutting edge at all times. This operation shall be repeated at least three times. In each case, the strike-off screed shall be picked up and carried back to the point of beginning. No backward strokes will be allowed. The strike-off screed shall be moved along the bulkheads or fixed templates with a combined longitudinal and transverse motion. This operation may be manual or mechanical. Standing or walking in the fresh concrete ahead of the strike-off screed will not be permitted.

907-804.03.19.7.3--Transverse Method. The transverse method requires that the screeding equipment be supported on accurately graded and supported rails placed beyond the gutter lines and parallel with the centerline of the bridge.

The machine shall be so constructed and operated as to produce a bridge deck of uniform density with minimum manipulation of the fresh concrete and achieved in the shortest possible time. Manual transverse methods of screeding will not be permitted.

The finishing machine shall be supported on vertically adjustable rails set a sufficient distance from the gutter line to allow free movement of the screed from gutter line to gutter line. Satisfactory means of load distribution with minimum rail deflection shall be provided. The screed rails for a deck pour shall be completely in place for the full length of the pour and shall be firmly secured prior to placing concrete. The screed rails shall be adjusted as necessary to compensate for settlement and deflection occurring during the screeding operations. Supports for the screed rail shall be located directly over slab overhang support brackets as referenced in Subsection 907-804.03.14.1.

At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed carriage to assure the specified clearance to the reinforcing steel.

The screed shall be equipped with a metal cutting edge or other approved mechanical means for accurately fine grading the plastic concrete to the required grade and surface smoothness and shall be supported by a bridging structure sufficiently rigid and heavy to perform operations

satisfactorily on concrete of minimum slump without vibration, distortion, and wrecking of forms. The screed shall be mechanically actuated to deliver the screeding action and for travel in a longitudinal direction at a uniform rate along the bridge deck.

The screed shall complete sufficient passes to strike off all of the excess concrete with ample mortar along the entire leading edge to assure filling of low spots. Care shall be taken to remove all objectionable material from the gutters where final hand finishing will be required.

The selection of the transverse method may require the Contractor to furnish bridge deck concrete which contains an approved water-reducing set-retarding admixture in the quantities approved by the Engineer at no additional cost to the State. See Subsection 713.02 for more information.

Other finishing requirements shall be in accordance with the general requirements in Subsection 907-804.03.19.7.1 and as specified on the plans.

907-804.03.19.7.4--Acceptance Procedure for Bridge Deck Smoothness. After the bridge decks and bridge end slabs are completed and preferably before the construction of the bridge railing, they shall be tested for ride quality using a Contractor furnished profilograph. Profile Index Values shall be determined in accordance with Department SOPs and these specifications. The profilograph shall meet the requirements of Subsection 907-804.03.19.7.5. Profiles will be obtained in the wheel paths of the main thru lanes and, where conditions allow, in the wheel paths of any auxiliary lanes or tapers. Profile Index Values for bridge decks and bridge end slabs shall be obtained for all state roads with four lanes or more, on state roads three lanes or less where the current traffic count is 2000 ADT or higher, or as designated on the plans. Ride quality tests will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge end slab as possible and shall proceed forward across the remainder of the bridge end slab, across the bridge deck and continue across the next bridge end slab to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge end slab. Bridges and bridge end slabs not requiring a ride quality test must meet a 1/8 inch in 10-foot straightedge requirement in longitudinal and transverse directions. Bridges in horizontal curves having a radius of less than 1000 feet at the centerline and bridges within the superelevation transition of such curves are excluded from a test with the profilograph.

The Profile Index Value for bridge decks including the bridge end slabs shall be averaged for the left and right wheel path for each lane and where applicable, each auxiliary lane and taper, and shall not exceed 65 inches per mile for each lane. Auxiliary lanes, tapers, shoulders and other areas that are not checked with the profilograph, shall meet a 1/8 inch in 10-foot straightedge check made transversely and longitudinally across the deck or slab. In addition, individual bumps or depressions exceeding 0.3 of an inch, when measured from a chord length of 25 feet, shall be corrected and the surface shall meet a 1/8 inch in 10-foot straightedge check made transversely across the deck or slab.

Bridge decks and bridge end slabs not meeting the preceding requirements shall be corrected. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of grinding the bridge deck in accordance with this specification. All corrective work shall precede final surface texturing. After completion of final surface texturing, all surface areas

corrected by grinding shall be sealed with a nonstaining 40% minimum alkylalkoxysilane penetrating sealant applied per the manufacturer's directions.

In case the bridge end slabs are to be constructed on a future project, the bridge deck(s) alone shall be tested for ride quality using the acceptance procedure outlined above, except that the ride quality test will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge as possible and shall proceed forward across the bridge deck to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge.

Expansion joint installation shall be delayed and the joint temporarily bridged to facilitate operation of the profilograph and grinding equipment across the joint wherever feasible.

It shall be the Contractor's responsibility to schedule profilograph testing. The Contractor shall notify the Department at least five (5) days in advance of profilograph testing. The Contractor shall ensure that the area to be tested has been cleaned and cleared of all obstructions. Profilograph testing of bridge decks and bridge end slabs shall be performed by the Contractor under supervision of the Engineer. All profilograph testing shall be performed at no additional cost to the Department. The Contractor will be responsible for traffic control associated with this testing operation.

907-804.03.19.7.4.1--Grinding Bridge Decks.

907-804.03.19.7.4.1.1--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture portland cement concrete pavement with diamond blades. The effective wheel base of the machine shall not be less than 12.0 feet. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 3.0 feet forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least 3.0 feet wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at cracks, joints, or other locations.

907-804.03.19.7.4.1.2--Grinding. The grinding areas will be determined by the Contractor and approved by the Engineer. The Contractor shall develop and submit to the Engineer for approval a Grinding Plan. The Contractor shall allow up to 45 days for the Department to review the Plan prior to starting any grinding operations. This plan shall include as a minimum:

- 1) Name of the project superintendent in responsible charge of the grinding operation.
- 2) List and description of all equipment to be used.
- 3) Maximum depth of each pass allowed by the grinding equipment.
- 4) Maximum width of each pass allowed by the grinding equipment.
- 5) Details of a sequence of the grinding operation.
- 6) Complete data from Profilograph runs, based on a 0.3 inch bump height, for each wheel path over the entire bridge including bridge end slabs, which shall include profile index,

bump locations (in stations), bump heights and proposed final cross-slopes. When a computerized profilograph is used, a complete printout of the profile including the header information for each wheel path will be required.

- 7) Data showing reinforcing steel clearance in all areas to be ground.
- 8) A detailed drawing of the deck showing areas to be ground with station numbers and grinding depths clearly indicated.
- 9) A description of grinding in areas where drains are in conflict with grind areas.
- 10) Details of any changes in deck drainage, anticipated ponding, etc.

The Engineer will evaluate the grinding plan for conformance with the plans and specifications, after which the Engineer will notify the Contractor of any additional information required and/or changes that may be needed. Any part of the plan that is unacceptable will be rejected and the Contractor shall submit changes for reevaluation. All approvals given by the Engineer shall be subject to trial and satisfactory performance in the field, and shall not relieve the Contractor of the responsibility to satisfactorily complete the work.

The construction operation shall be scheduled and proceed in a manner that produces a uniform finished surface. Grinding will be accomplished in a manner that eliminates joint or crack faults while providing positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane. Auxiliary or ramp lane grinding shall transition as required from the mainline edge to provide positive drainage and acceptable riding surface.

The operation shall result in a finished surface that conforms as close as possible to the typical cross-section and the requirements specified in Subsection 907-804.03.19.7.4.1.3.

The Contractor shall establish positive means for removal of grinding residue. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities.

907-804.03.19.7.4.1.3--Final Surface Texture. The grinding process shall produce a finish surface that is as close as possible to grade and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall be approximately 1/16 inch higher than the bottoms of the grooves with approximately 53 to 57 evenly spaced grooves per foot. Grinding chip thickness shall be a minimum of 0.080 inches thick.

The finished bridge decks and bridge end slabs shall be retested for riding quality using a Contractor furnished profilograph meeting the requirements of Subsection 907-804.03.19.7.5. The finished results shall meet the following conditions:

- (a) Individual bumps or depressions shall not exceed 0.3 inches when measured from a chord length of 25 feet.
- (b) The final index value for the bridge deck and bridge end slabs shall be an average of both the right and left wheel paths of each lane and shall not exceed 65 inches per mile.

The final profilogram will be furnished to the Engineer for informational purposes.

907-804.03.19.7.5--Profilograph Requirements. The smoothness of the bridge deck will be determined by using a California Profilograph to produce a profilogram (profile trace) at each designated location. The surface shall be tested and corrected to a smoothness index as described herein with the exception of those locations or specific projects that are excluded from a smoothness test with the profilograph.

The profilograph, furnished and operated by the Contractor under supervision of the Engineer, shall consist of a frame at least 25 feet in length supported upon multiple wheels having no common axle. The wheels shall be arranged in a staggered pattern so that no two wheels will simultaneously cross the same bump. A profile is to be recorded from the vertical movement of a sensing mechanism. This profile is in reference to the mean elevation of the contact points established by the support wheels. The sensing mechanism, located at the mid-frame, may consist of a single bicycle-type wheel or a dual-wheel assembly consisting of either a bicycle-type (pneumatic tire) or solid rubber tire vertical sensing wheel and a separate bicycle-type (pneumatic tire) longitudinal sensing wheel. The wheel(s) shall be of such circumference(s) to produce a profilogram recorded on a scale of one (1) inch equal to 25 feet longitudinally and one (1) inch equal to one (1) inch (full scale) vertically. Motive power may be provided manually or by the use of a propulsion unit attached to the center assembly. In operation, the profilograph shall be moved longitudinally along the pavement at a speed no greater than 3 MPH so as to reduce bounce as much as possible. The testing equipment and procedure shall comply with the requirements of Department SOP.

The Contractor may elect to use a computerized version of the profilograph in lieu of the standard profilograph. If the computerized version of the profilograph is used, it shall meet the requirements of Subsection 907-804.03.19.7.5.1.

907-804.03.19.7.5.1--Computerized Profilograph.

907-804.03.19.7.5.1.1--General The computerized profilograph, furnished and operated by the Contractor under the supervision of the Engineer, shall be equipped with an on-board computer capable of meeting the following conditions.

Vertical displacement shall be sampled every three (3) inches or less along the bridge deck. The profile data shall be bandpass filtered in the computer to remove all spatial wavelengths shorter than two (2) feet. This shall be accomplished by a third order, low pass Butterworth filter. The resulting band limited profile will then be computer analyzed according to the California Profilograph reduction process to produce the required inches per mile index. This shall be accomplished by fitting a linear regression line to the length of bridge. This corresponds to the perfect placement of the blanking band bar by a human trace reducer. Scallop above and below the blanking band are then detected and totaled according to the California protocol. Bump/Dip analysis shall take place according to the California Profilograph reduction process.

The computerized profilograph shall be capable of producing a plot of the profile and a printout which will give the following data: Stations every twenty five (25) feet, bump/dip height and bump/dip length of specification (3/10 of an inch and 25 feet respectively), the blanking band width, date of measurement, total profile index in inches per mile for the measurement, total length

of the measurement, and the raw inches for each segment.

907-804.03.19.7.5.1.2--Mechanical Requirements. The profilograph shall consist of a frame twenty five (25) feet long supported at each end by multiple wheels. The frame shall be constructed to be easily dismantled for transporting. The profilograph shall be constructed from aluminum, stainless steel and chromed parts. The end support wheels shall be arranged in a staggered pattern such that no two wheels cross a transverse joint at the same time. The relative smoothness shall be measured by the vertical movement of an eight (8) inch or larger diameter sensing wheel at the midpoint of the 25-foot frame. The horizontal distance shall be measured by a twenty (20) inch or larger diameter pneumatic wheel. This profile shall be the mean elevation referenced to the twelve points of contact with the pavement established by the support wheels. Recorded graphical trace of the profile shall be on a scale of one inch equals one inch (full scale) vertical motion of the sensing wheel and one inch equals 25 feet horizontal motion of the profilograph.

907-804.03.19.7.5.1.3--Computer Requirements. The computer shall have the ability to produce output on sight for verification. The computerized output shall indicate the profile index for each specified section of bridge deck. Variable low and high pass third-order Butterworth filtering options shall be available. The printout shall be capable of showing station marks automatically on the output. Blanking band positioning for each specified section of the bridge deck shall be placed according to the least squares fit line of the collected data. Variable bump and dip tests shall be available to show “must correct” locations on the printout. The computer must have the ability to display on screen “must correct” conditions and alert the user with an audible warning when a “must correct” location has been located. The computer must have the ability to store profile data for later reanalysis. The measurement program must be menu driven and PC compatible. User selected options, identification, calibration factors, and time and date stamps shall be printed at the top of each printed report for verification. The control software must be upgradeable. A power source shall be included for each profilograph and be capable of supplying all power needs for a full days testing.

907-804.03.19.8--Finishing Horizontal Surfaces of Footings or Top Slabs of Box Bridges, Culverts, or Other Structures. The finishing of horizontal surfaces of footing or top slabs of box bridges, culverts, or other structures shall be achieved by placing an excess of material in the form and removing or striking off the excess with a template, forcing the coarse aggregate below the mortar surface. After the concrete has been struck off the surface shall be given a Class 6 finish.

907-804.03.19.9--Finishing Exposed Surfaces of Sidewalks. After the concrete has been deposited in place it shall be consolidated and the exposed surface shall be given a Class 6 finish. An edging tool of the required radius shall be used on all edges and at all expansion joints. The surface shall have a granular texture which will not be slick when wet.

Sidewalk surfaces shall be laid out in blocks with an approved grooving tool as shown on the plans or as directed.

907-804.03.20--Opening Bridges.

907-804.03.20.1--Public Traffic. Unless otherwise specified, concrete bridge decks shall be closed to public highway traffic for a period of at least 21 days after placing concrete.

907-804.03.20.2--Construction Traffic. Unless otherwise specified, concrete bridge decks shall be closed to construction traffic for the time required for curing in Subsection 907-804.03.17 and the minimum required compressive strength for the concrete placed is obtained.

907-804.03.21--Final Cleanup. Upon completion of the work all equipment, surplus materials, forms, and waste material shall be removed, the bridge cleaned, and the site of the work given a final cleanup.

907-804.03.22--Precast-Prestressed Concrete Bridge Members.

907-804.03.22.1--General. All installations and plants for the manufacture of precast-prestressed bridge members shall be PCI (Precast / Prestressed Concrete Institute) Certified. Bridge members manufactured in plants or installations not so approved will not be accepted for use in the work. The Contractor or other manufacturer shall employ a technician skilled in the adopted system of prestressing to supervise the manufacturing operations. This technician shall be certified according to the guidelines of this specification. The Contractor shall develop and implement a Quality Control Program as per Division I of PCI Quality Control Manual, 4th Edition. The Quality Control Program shall be submitted to the District Materials Engineer for approval.

907-804.03.22.2--Stressing Requirements. The jacks for stressing shall be equipped with accurate calibrated gauges for registering the jacking pressure. Means shall be provided for measuring elongation of strands to at least the nearest 1/16 inch.

Prior to beginning work, the Contractor or manufacturer shall have all jacks to be used, together with their gauges, calibrated by an approved laboratory. All jacks and gauges shall have an accuracy of reading within two percent. The testing agency shall furnish the Engineer a statement certifying that the jacks and gauges meet this requirement. During the progress of the work, if a gauge appears to be giving erratic results or if the gauge pressure and elongations indicate materially differing stresses, recalibration will be required.

Calibration of jacks and gauges shall be repeated at intervals deemed necessary by the Engineer. These intervals for calibration shall not exceed one year.

Shop drawings of prestressed beams, including an erection plan, shall be submitted in duplicate to the Bridge Engineer for approval prior to manufacture of members.

907-804.03.22.2.1--Methods. Plans for the particular bridge members will show prestressing by one of the following methods:

(A) Pretensioning. The prestressing strands are stressed initially. After the concrete is placed, cured, and has attained the compressive strength shown on the plans, the stress is transferred to the member. The method used for pretensions shall be in accordance to Division V of PCI Quality Control Manual, 4th Edition.

(B) Posttensioning. The posttensioning tendons are installed in voids or ducts and are stressed and anchored after development of the compressive strength specified on the plans. The voids or ducts are then pressure grouted.

(C) Combined Method. Part of the reinforcing is pretensioned and part posttensioned. Under this method all applicable requirements for the two methods specified shall apply to the respective stressing elements being used.

907-804.03.22.2.2--Alternate Details for Prestressed Members. In the event that the Contractor / Manufacturer desires to use materials or methods that differ in any respect from those shown on the plans or described in these specifications, the Contractor shall submit for approval full plan details on acceptable tracings suitable for reproduction and specifications which shall become the property of the Department. In order for alternate materials and/or methods to be considered, they will be required to comply fully with the following:

- A. Provisions equal to those stipulated in these specifications.
- B. Current AASHTO Specifications.
- C. Recommendations of materials manufacturer.
- D. Camber tolerance of beams and spans shown on plans.

Note: Alternate materials and methods will not be authorized on Federal-Aid Projects.

The Engineer shall be the sole judge as to the adequacy and propriety of any variation of materials or methods.

907-804.03.22.2.3--Stressing Procedure.

(A) General. Stressing shall be performed by suitable jacks working against unyielding anchorages and capable of maintaining the required stress for an indefinite period without movement or yielding. Strands may be stressed singularly or in a group.

The tension to be applied to each strand shall be as shown on the plans. The tension shall be measured by both jacking gauges and elongations in the strands and the result shall check within close limits.

It is anticipated that there will possibly be a difference in indicated tension between jack pressure and elongation of about five (5) percent. In this event, the discrepancy shall be placed on the side of slight overstress rather than understress.

In the event of an apparent discrepancy between gauge pressure and elongation of as much as five (5) percent, the entire operation shall be carefully checked, and the source of error determined before proceeding further.

Elongation is to be measured after the strands have been suitably anchored, and all possible slippage at the anchorages has been eliminated.

In all stressing operations, the stressing force shall be kept as nearly symmetrical about the vertical axis of the member as practicable.

(B) Pretensioning. All strands to be prestressed shall be brought to a uniform initial tension prior to being given their full pretensioning. This uniform initial tension of approximately 1000 to 2000 pounds shall be measured by suitable means such as a dynamometer so that its value can be used as a check against elongation computed and measured.

After the initial tensioning, the strand or group shall be stressed until the required elongation and jacking pressure is within the limits specified.

When the strands are stressed in accordance with the plan requirements and these specifications and all other reinforcing is in place, the concrete shall be placed in the prepared forms.

Strand stress shall be maintained until the concrete between anchorages has attained the required compressive strength as determined by cylinder tests, after which the strands shall be cut off flush with the ends of column members, and cut as shown on the plans for beams, girders, etc. Strands shall be cut or released in such a manner that eccentricity of prestress will be kept to a minimum and no damage to the member will result. The strand cutting pattern shall be as shown on the plans or as approved by the Bridge Engineer.

(C) Posttensioning. For all posttensioning tendons/bars the anchor plates shall set exactly normal in all directions to the axis of the tendon/bar. Parallel wire anchorage cones shall be recessed within the beams. Tensioning shall not take place until the concrete has reached the compressive strength shown on the plans.

Elongation and jacking pressures shall make appropriate allowance for all possible slippage or relaxation of the anchorage. Posttensioning tendons/bars shall be stressed in the order and manner shown on the plans.

The units shall be tensioned until the required elongations and jacking pressures are attained and reconciled within the limits specified in Subsection 907-804.03.22.2.3(A) with such overstresses as approved by the Engineer for anchorage relaxation.

Independent references shall be established adjacent to each anchorage to indicate any yielding or slippage that may occur between the time of initial stressing and final release of the strands.

Straight tendons/bars may be tensioned from one end. Unless otherwise specified, curved tendons shall be stressed by jacking from both ends of the tendons.

(D) Combined Method. In the event that girders are manufactured with part of the reinforcement pretensioned and part posttensioned, the applicable portions of the requirements listed herein shall apply to each type.

907-804.03.22.3--Manufacture.

907-804.03.22.3.1--Forms. The forms used for precast-prestressed bridge members shall meet the requirements of Division II of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.2--Placing and Fastening Steel. Placing and fastening of all steel used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.3--Holes for Prestressing Tendons/Bars. Holes provided in girders for prestressing tendons/bars shall be formed by means of inflatable rubber tubing, flexible metal conduit, metal tubing, or other approved means.

907-804.03.22.4--Placing and Curing Concrete.

907-804.03.22.4.1--Placing. The placing of concrete shall meet the applicable requirements of Division III of PCI Quality Control Manual, 4th Edition.

907-804.03.22.4.2--Curing. Initial and accelerated curing of all members shall meet the applicable requirements of Division IV of PCI Quality Control Manual, 4th Edition except for the following listed requirements.

The source of heat for accelerated cure shall be steam. Calibrated thermocouples shall be implanted into the concrete members to monitor areas expected to have maximum and minimum heat. Curing methods and procedures listed in the prestress producer's PCI Quality System Manual shall be approved by the Department before their implementation.

907-804.03.22.4.3--Removal of Side Forms. Side forms may be removed after the concrete has attained sufficient strength to maintain a true section. In order to obtain "sufficient strength", it may be necessary to cure members for 12 hours or more as prescribed in Subsection 907-804.03.22.4.2, or to attain a minimum compressive strength of 1000 psi.

If high-early-strength concrete is obtained by use of low slump (0 to 1.5-inch) concrete, vacuum process, or other approved methods, side forms may be removed earlier; however, approval of the methods and revision from normal schedules will be made only after inspections by the District Materials Engineer and Materials Division have determined that satisfactory results will be attained by the methods and schedules proposed.

907-804.03.22.4.4--Grouting. The holes through posttensioned members in which the tendons are installed shall be equipped with approved grouting vents. All prestressing tendons to be bonded shall be free of dirt, loose rust, grease, or other deleterious substances. Before grouting, the ducts shall be free of water, dirt, and other foreign substances. The ducts shall be blown out with compressed air until no water comes through the ducts. For long members with draped tendons an open tap at low points may be necessary. After completion of stressing, the annular space between sides of tendon and sides of hole shall be grouted as set in the following paragraphs.

With the grouting vent open at one end of the core hole, grout shall be applied continuously under moderate pressure at the other end until all entrapped air is forced out through the open grout vent, as evidenced by a steady stream of grout at the vent. Whereupon, the open vent shall be closed under pressure. The grouting pressure shall be gradually increased to a refusal of at least 75 psi and held at this pressure for approximately 10 seconds, and the vent shall then be closed under this pressure.

Portland cement grout shall consist of a mixture of:

- 1 part Type 1 portland cement
- 1/4 part fly ash
- 3/4 part washed sand *
- 4 to 6 gallons of water per bag of cement.

* all passing No. 16 sieve and not more than 5% retained on No. 30

Water-reducing admixtures, subject to approval by the Engineer, shall be used in accordance with the manufacturer's recommendations.

The grout shall be mixed in a mechanical mixer, shall have the consistency of heavy paint, and shall be kept agitated until placed.

Members shall not be moved before the grout has set, ordinarily at least 24 hours at 80°F or higher.

907-804.03.22.5--Finishing and Marking. Units shall be given a Class 1 finish at the plant and shall be given a Class 2 finish after erection when required.

Recesses in girders at end of diaphragm bars, holes left by form ties, and other surface irregularities shall be carefully cleaned and patched with an approved non-shrink commercial grout or a non-shrinkage mortar of the following composition:

- 1 part Type 1 portland cement
- 1 1/2 to 2 parts fine sand
- 1/2 to 3/4 ounces aluminum powder per bag of cement
- Approved admixture per Subsection 713.02.
- Sufficient water to produce a workable but rather stiff mix.

The units shall be clearly marked in accordance with Department's *Materials Division Inspection, Certification and Testing Manual*.

907-804.03.22.6--Handling, Storage, and Installation. Posttensioned members may be handled immediately after completion of stressing and grout has set. Pretensioned members may be handled immediately after release of tensioning. In either case, the members shall have developed a minimum compressive strength of 4000 psi prior to handling. In the event stressing is not done in a continuous operation, members shall not be handled before they are sufficiently stressed, as determined by the Engineer, to sustain all forces and bending moments due to handling. In the

handling, storage, and transporting of beams or girders, they shall be maintained in an upright position (position as cast) at all times and shall be picked up from points within distance from beam ends equal to beam depth or at pick-up points designated on the plans. Disregard of this requirement and dropping of units may be cause for rejection, whether or not injury to the unit is apparent. Piles shall be picked up and loaded for shipment at points shown by the suspension diagram on the plans. Extreme care shall be used in handling and storing piles to prevent damage. The dropping of a pile may be cause for rejection of same, whether or not there is apparent injury to the member.

Care shall be exercised during the storage, hoisting, and handling of precast units to prevent damage. Damaged units shall be replaced by the Contractor at no additional costs to the State.

When members are stacked for storage, each layer shall be supported at or near the pick-up points. Supports shall be carefully placed in a vertical line in order that the weight of any member will not stress an underlying member. To prevent damage in moving members it is suggested that rigid supports be covered with a cushion of wood or other resilient material.

Members shall not be transported until at least one day after the concrete has reached a compressive strength of 5000 psi or greater strength when shown on the plans.

Piles used in salt water shall not be driven until concrete is seven days old, and air-entrained concrete shall be used in such piles.

After prestressed concrete voided slab units are set, doweled and bolted in their final position the keyways and dowel holes shall be filled with an approved non-shrink grout. Traffic shall not be permitted on the spans for 24 hours after grouting, and heavy construction equipment exceeding 15 tons will not be permitted on the spans for a period of 72 hours after grouting.

Adjacent slab units that mismatch more than one-fourth inch shall be adjusted prior to grouting of the shear keys. The maximum deviation from cross-section and grade (exclusive of camber) at any point shall not exceed one-fourth inch; and when the surface is checked with a ten-foot straightedge applied both parallel and perpendicular to the centerline, the variance shall not exceed one-fourth inch.

In addition to the requirements set out in this section, the applicable requirements of Section 803 shall apply.

907-804.03.22.7--Tolerances for Accepting Precast Prestressed Concrete. Member shall meet the dimension tolerances set by Division VII of PCI Quality Control Manual, 4th Edition.

907-804.03.22.8--Testing of Materials. Concrete and aggregate testing shall meet the requirements of Division VI of PCI Quality Control Manual, 4th Edition, except that the concrete mixture design shall meet the requirements of Subsection 907-804.02.10. Also, in addition to concrete compressive tests samples made for detensioning and 28-day strength, test samples shall be made and tested in order to prove compliance to the requirements of Subsection 907-804.03.22.6 for handling and shipping prestressed members. Compressive strength test cylinders

for detensioning, handling and shipping shall receive the same type curing as the prestressed members for which they represent. Compressive strength samples shall be made each day for each prestress casting bed.

907-804.03.22.9--Testing Personnel. Technicians testing portland cement concrete used in the production of precast-prestressed members shall be PCI Quality Control Technician/Inspector Certified. Each producer of precast-prestressed members shall have at least one PCI Level II certified technician on site during production for Department projects.

907-804.03.22.10--Documentation. The Precast-Prestressed Producer for each precast-prestressed concrete bridge member shall maintain documentation as set forth in the Department's *Materials Division Inspection, Certification and Testing Manual*. Testing and inspection record forms shall be approved by the Central Laboratory and as a minimum contain information listed in Division VI of PCI Quality Control Manual, 4th Edition.

907-804.03.22.11--Use in the Work. Before any precast-prestressed member is incorporated into the work, documentation as described in Subsection 907-804.03.22.10 is required along with visual inspection of the member at the bridge construction site. Project Office personnel as per the Department's *Materials Division Inspection, Certification and Testing Manual* will make visual inspection of the precast-prestressed member at the bridge construction site.

907-804.04--Method of Measurement. Concrete, complete and accepted, will be measured in cubic yards. The concrete volume will be computed from the neat dimensions shown on the plans, except for such variations as may be ordered in writing by the Engineer. The quantity of concrete involved in fillets, scorings, and chamfers one square inch or less in cross-sectional area will be neglected. Deductions shall be made for the following:

- (1) The volume of structural steel, including steel piling encased in concrete.
- (2) The volume of timber piles encased in concrete, assuming the volume to be 0.80 cubic foot per linear foot of pile.
- (3) The volume of concrete piles encased in concrete.

No deduction will be made for the volume of concrete displaced by steel reinforcement, floor drains, or expansion joint material that is one inch or less in width normal to the centerline of the joint. Where railing is bid as a separate item, that portion of the railing above the top of the curb, above the surface of the sidewalk, or above the bridge roadway, as the case may be, will not be included in the measurement of concrete, but will be measured as railing. Massive pylons or posts which are to be excepted from payment for railing and are intended to be measured for as concrete will be so noted on the plans.

When shown on the plans or directed by the Engineer, concrete placed as a seal for cofferdams will be measured by the cubic yard actually in place, except that no measurement will be made of seal concrete placed outside of an area bounded by vertical planes 18 inches outside the neat lines of the footing as shown on the plans or as directed and parallel thereto.

Reinforcing steel will be measured and paid for in pounds as set out in Section 805.

Unless otherwise specified, structural steel will be measured and paid for as set out in Section 810.

Excavation for bridges will be measured and paid for as in Section 801.

Piling will be measured and paid for as set out in Sections 802 and 803.

Railing will be measured and paid for as set out in Section 813.

Prestressed concrete beams and plank will be measured by the linear foot.

Prestressed concrete voided slab units, interior and exterior with railing, and precast concrete caps, intermediate and end cap with winged abutment wall, of the size and type specified will be measured by the unit complete in place and accepted. Railing, winged abutment walls, grout, tie rods, nuts, washers, bearing pads and other appurtenances will not be measured for separate payment.

907-804.05--Basis of Payment. Concrete will be paid for at the contract unit price per cubic yard for the class or classes specified, complete in place. Prestressed concrete beams and plank will be paid for at the contract unit per linear foot of specified size and type.

Prestressed concrete voided slab units and precast caps will be paid for at the contract unit price per each for the specified types and sizes, complete in place and accepted; which price shall be full compensation for furnishing, hauling and erecting the members; including all prestressing reinforcement and other reinforcement in the members. Payment at the contract unit prices bid shall be full compensation for furnishing all materials, equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-804-A: Bridge Concrete, Class ____	- per cubic yard
907-804-B: Box Bridge Concrete, Class ____	- per cubic yard
907-804-C: <u>Length</u> Prestressed Concrete Beam, Type ____	- per linear foot
907-804-D: <u>Length</u> Prestressed Concrete Plank	- per linear foot
907-804-E: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Interior	- per each
907-804-F: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Exterior	- per each
907-804-G: <u>Length</u> Precast Concrete Caps, End Unit with Wall	- per each
907-804-H: <u>Length</u> Precast Concrete Caps, Intermediate Unit	- per each

SECTION 905 PROPOSAL

Date 10/27/16Hattiesburg
Forrest County, Mississippi

Sirs: The following proposal is made on behalf of RJM - McQueen Contracting, Inc.
of Collins, MS
for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of:

Neel - Schaffer

The Specifications are the current Standard Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

Attached hereto is a certified check, cashier's check or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law).

INSTRUCTION TO BIDDERS: Alternate and Optional Items on Bid Schedule.

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.
2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.
3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 102.06 prior to or at the time of execution of the contract.
4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

SECTION 905 PROPOSAL (Continued)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for five percent (5%) of the total bid and hereby agree that in case of my (our) failure to execute the contract and furnish bonds within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the Local Public Agency as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. _____	DATED _____	ADDENDUM NO. _____	DATED _____
ADDENDUM NO. _____	DATED _____	ADDENDUM NO. _____	DATED _____

TOTAL ADDENDA: _____
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE 10/27/16

RJM-McQueen Contracting, Inc.

BY [Signature] Contractor
Signature

TITLE President

ADDRESS 80 Ramsey McQueen Rd
Collins. Ms 39428

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of Mississippi and the names, titles and business addresses of the executives are as follows:

<u>Regina McQueen</u>	<u>80 Ramsey McQueen Rd Collins, MS</u>
President	Address
<u>Regina McQueen</u>	<u>80 Ramsey McQueen Rd Collins, MS</u>
Secretary	Address
<u>Regina McQueen</u>	<u>80 Ramsey McQueen Rd Collins, MS</u>
Treasurer	Address

The following is my (our) itemized proposal.

Revised 11/2008

SECTION 905 PROPOSAL (Bid Sheet No. 3-5)

PROJECT NUMBER: STP-7197-00(002) LPA / 106879-701000

COUNTY: FORREST

PROJECT DESCRIPTION: TUSCAN AVENUE SIDEWALK PROJECT

I (We) agree to complete the entire project within the specified contract time.

***** SPECIAL NOTICE TO BIDDERS *****

BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED.
BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATE LOCATED AT THE END OF THE BID SHEETS IS SIGNED.

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
201-A001	1	ACRE	CLEARING AND GRUBBING	1,000.00	1,000.00
202-A001	1	LS	REMOVAL OF OBSTRUCTIONS	XXXX	7,000.00
202-B035	1,475	SQ. YD.	REMOVAL OF CONCRETE SIDEWALK	12.00	17,700.00
202-B057	2	EACH	REMOVAL OF INLETS, ALL SIZES	800.00	1,600.00
202-B064	24	LIN. FT.	REMOVAL OF PIPE, 8" AND ABOVE	9.00	216.00
202-B078	821	SQ. YD.	REMOVAL OF PAVEMENT, ALL TYPES AND DEPTHS	13.00	10,673.00
202-B093	270	LIN. FT.	REMOVAL OF CURB & GUTTER, ALL TYPES	18.00	4,860.00
203-A003	50	CU. YD.	UNCLASSIFIED EXCAVATION, FM, AH	10.00	500.00
203-EX017	50	CU. YD.	BORROW EXCAVATION, AH, FME, CLASS B9	30.00	1,500.00
203-G003	10	CU. YD.	EXCESS EXCAVATION, FM, AH	80.00	800.00
211-B001	100	CU. YD.	TOPSOIL FOR SLOPE TREATMENT, CONTRACTOR FURNISHED	18.00	1,800.00
907-213-A001	1	TON	AGRICULTURAL LIMESTONE	75.00	75.00
907-216-A001	1,600	SQ. YD.	SOLID SODDING, CENTIPEDE	2.30	3,680.00
219-A001	260	KGAL	WATERING	20.00	5,200.00
220-A001	1	ACRE	INSECT PEST CONTROL	50.00	50.00
234-A001	400	LIN. FT.	TEMPORARY SILT FENCE	4.00	1,600.00
907-234-A002	100	LIN. FT.	WATTLES, 12"	12.00	1,200.00
907-246-A002	100	EACH	SANDBAGS	4.00	400.00
907-601-A001	14	CU. YD.	CLASS "B" STRUCTURAL CONCRETE	780.00	10,920.00
907-601-B003	3	CU. YD.	CLASS "B" STRUCTURAL CONCRETE, MINOR STRUCTURES	1,200.00	3,600.00
602-A001	1,660	LBS.	REINFORCING STEEL	1.55	2,573.00
604-A001	244	LBS.	CASTING	3.00	732.00
604-B002	200	LBS.	GRATING	6.00	1,200.00
907-603-PE212	16	LIN. FT.	15" CORRUGATED POLYETHYLENE PIPE	22.00	352.00

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
907-603-PP005	2	EACH	24" PREFORMED POLYETHYLENE DRAINAGE CATCH BASIN	1,500.00	3,000.00
608-A001	3,142	SQ. YD.	CONCRETE SIDEWALK, WITHOUT REINFORCEMENT	41.50	130,393.00
609-D006	160	LIN. FT.	COMBINATION CONCRETE CURB AND GUTTER, TYPE I	33.00	5,280.00
613-D006	24	EACH	ADJUSTMENT OF WATER METER	220.00	5,280.00
613-D011	7	EACH	ADJUSTMENT OF WATER VALVE	300.00	2,100.00
614-B002	735	SQ. YD.	CONCRETE DRIVEWAY, WITH REINFORCEMENT, 6-INCH THICKNESS	52.00	38,220.00
907-618-A001	1	LS	MAINTENANCE OF TRAFFIC	XXXX	6,110.00
907-618-B001	1	SQ. FT.	ADDITIONAL CONSTRUCTION SIGNS	\$10.00	\$10.00
620-A001	1	LS	MOBILIZATION	XXXX	12,170.00
630-A001	18	SQ. FT.	STANDARD ROADSIDE SIGNS, SHEET ALUMINUM, 0.080" THICKNESS	70.76	1,273.68
630-C004	28	LIN. FT.	STEEL U-SECTION POSTS, 3.0 TO 3.5 LB/FT	4.05	113.40
907-626-G004	2,912	LIN. FT.	THERMOPLASTIC DETAIL STRIPE, WHITE, 6" EQUIV.	2.30	6,697.60
907-626-H005	6	SQ. FT.	THERMOPLASTIC LEGEND, WHITE	119.00	714.00
907-626-E003	1,200	LIN. FT.	6" THERMOPLASTIC TRAFFIC STRIPE, CONTINUOUS YELLOW	1.75	2,100.00
TOTAL BID				\$	292,692.68

292,692.68

SECTION 905 PROPOSAL (Bid Sheet No. 5-5)

PROJECT NUMBER: STP-7197-00(002) LPA / 106879-701000

COUNTY: FORREST

PROJECT DESCRIPTION: TUSCAN AVENUE SIDEWALK PROJECT

COMPLETE ITEM NOS. 1, 2 AND/OR 3 AS APPROPRIATE, SEE NOTICE TO BIDDERS NO. 5266 AND SUPPLEMENT.

1. I/We agree that no less than _____ percent shall be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE and WBE).
2. Classification of Bidder: Small Business (DBE) ☒ Small Business (WBE) ☒
3. A joint venture with a Small Business (DBE/WBE): YES ☐

*** SIGNATURE STATEMENT***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFY THAT THE FIGURES SHOWN THERIN CONSTITUTE THEIR OFFICIAL BID.



BIDDER'S SIGNATURE

**Certification with regard to the Performance of Previous
Contracts or Subcontracts subject to the Equal Opportunity
Clause and the filing of Required Reports**

The Bidder X, proposed Subcontractor , hereby certifies that he has X, has not , participated in a previous contract or subcontract subject to the Equal Opportunity Clause, as required by Executive Orders 10925, 11114, or 11246, and that he has , has not , filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

RJM-McQueen Contracting, Inc.
(COMPANY)
BY [Signature]
President
(TITLE)

DATE: 10/27/16

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and Subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime Contractors and Subcontractors who have participated in a previous contract or subcontract subject to the Executive orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such Contractors submit a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

NON-COLLUSION AFFIDAVIT

(Execute in duplicate)

State of Mississippi

County of CovingtonI, Regina McQueen,
(Name of person signing certification)individually, and in my capacity as President of
(Title)RJM-McQueen Contracting, Inc. do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

RJM-McQueen Contracting, Inc., Bidder
(Name of Firm, Partnership, or Corporation)on Project No. STP-7197-00(002) LPA/106879-701000,in Forrest County County(ies), Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in (b) above; and
- d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently \$25,000) which are excluded from the certification requirements.

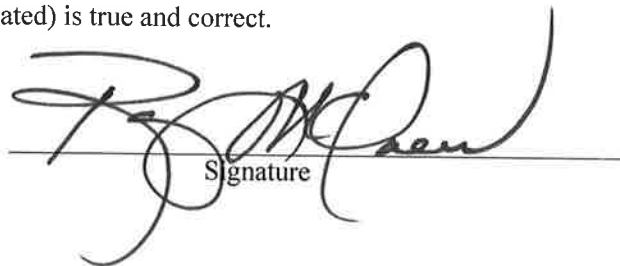
The bidder further certifies, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000. The bidder shall include the language of the certification in all subcontracts exceeding \$100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on 10/27/16


Signature

(11/23/92F)

LOCAL PUBLIC AGENCY (LPA)

SECTION 902

CONTRACT FOR _____
LOCATED IN THE COUNTY OF _____
STATE OF MISSISSIPPI,

This contract entered into by and between the Local Public Agency _____
_____ (hereinafter "LPA") on one hand, and the undersigned contractor, on the other
witnesseth;

That, in consideration of the payment by the LPA of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the LPA.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the LPA or their authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Mississippi Department of Transportation or Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

Manager, WIN Job Center nearest the project

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the ____ day of _____, 20____.

Contractor(s)

By _____

Title _____

Signed and sealed in the presence of:
(Names and address of witnesses)

By _____

LPA Official

LPA Clerk

Award authorized by the LPA in session on the ____ day of _____, 20____, as recorded _____

LOCAL PUBLIC AGENCY (LPA)

S E C T I O N 9 0 3
PERFORMANCE AND PAYMENT BOND

CONTRACT BOND FOR _____

LOCATED IN THE COUNTY OF _____

STATE OF MISSISSIPPI,

Know all men by these presents: that we, _____
(Contractor)

(hereinafter "Principal"), a _____

residing at _____ in the State of _____

and _____
(Surety)

residing at _____ in the State of _____

authorized to do business in the State of Mississippi, under the laws thereof, as surety, are held and firmly bound

unto the Local Public Agency _____, (hereinafter

"LPA"), in the sum of _____

(\$ _____) Dollars, lawful money of the United States of America, to be

paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or

assigns jointly and severally by these presents.

The conditions of this bond are such, that whereas the said Principal, has (have) entered into a contract with the

LPA, bearing the date of _____ day of _____ A.D. _____ hereto annexed, for the

construction of certain project(s) in the State of Mississippi as mentioned in said contract in accordance with the

Contract Documents therefor, on file in the offices of the LPA.

Now therefore, if the above bounden Principal in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said LPA from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the LPA at the instance of any officer of the LPA authorized in such cases, for double any amount in money or property, the LPA may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the

LOCAL PUBLIC AGENCY (LPA)

Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes, licenses, assessments, contributions, damages, any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the LPA Official, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

_____	_____
(Contractors) Principal	Surety
By _____	By _____
	(Signature) Attorney in Fact
	Address: _____

Title _____	_____
(Contractor's Seal)	(Printed) Mississippi Agent

	(Signature) Mississippi Agent
	Address: _____

	(Surety Seal)

	Mississippi Insurance ID Number

Date 10/8/15

**Guidance for Federal Spending Transparency:
Subaward and Executive Compensation Data
Reporting Requirements for FFATA Implementation**

Summary

1. Prime awardees and sub awardees of Federal financial assistance must report executive compensation data if they meet the statutory reporting thresholds. For the Federal-aid Highway Program, this means that the State, and any subawardees of Federal-aid funds through the State, is subject to the executive compensation reporting requirement.

- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

Background

Beginning October 1, 2010, guidance directs compliance with the Transparency Act to report prime and first-tier subaward data. Federal agencies and prime awardees will report to ensure disclosure of Federal contract and grant subaward and executive compensation data.

The Transparency Act requires information disclosure concerning entities receiving Federal financial assistance through Federal awards such as Federal contracts, sub-contracts, grants, and sub-grants.

Specifically, the Transparency Act's section 2(b)(1) requires the Office of Management and Budget ("OMB") to ensure the establishment of a publicly available website that contains the following information about each Federal award:

- name of the entity receiving the award;
- amount of the award;
- information on the award including transaction type, funding agency, the North American Industry Classification System code or Catalog of Federal Domestic Assistance number, program source, award title descriptive of the purpose of each funding action;

- location of the entity receiving the award and primary location of performance under the award, including city, State, congressional district, and country;
- unique identifier of the entity receiving the award and the parent entity of the recipient, should the entity be owned by another entity; and
- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C ".
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B ".
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B ". A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C ".
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B ".
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B ". A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED:

Prime Contractor Firm Name

APPROVED BY:

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C ".
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B ".
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B ". A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: STP-7197-00(002)LPA/106889
County: Forrest

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

Firm Name: Road-Pro Safety, Inc.
Contact Name/Title: Peggy Miley, President
Firm Mailing Address: P.O. Box 54242 JACKSON, MS 39288-4292
Phone Number: 601-932-8220
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: Traffic Control Products, Co. Inc.
Contact Name/Title: Wendy Garner, President
Firm Mailing Address: P.O. Box 820 Brandon, MS 39043
Phone Number: 601-939-2415
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm


SUBMITTED BY (Signature)
RSM-McQueen Contracting, Inc.
FIRM NAME

Submit this form to the LPA as a part of your bid package. If this form is not signed and included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504.

Please make copies of this form when needed and also add those copies to the bid package.

*SPECIAL PROVISIONS, PROPOSAL AND CONTRACT DOCUMENTS
FOR
THE CONSTRUCTION OF SIDEWALK
FEDERAL AID PROJECT NUMBER
STP 7197-00(002) LPA/106879-701000*

***TUSCAN AVENUE SIDEWALK PROJECT
FOR THE
CITY OF HATTIESBURG
HATTIESBURG, MISSISSIPPI
FORREST COUNTY***



2016

PREPARED BY



6/30/2016



**BIDDER CHECK LIST
(FOR INFORMATION ONLY)**

- _____ All unit prices and item totals have been entered in accordance with Subsection 102.06 of the Mississippi Standard Specifications for Road and Bridge Construction.
- _____ First sheet of SECTION 905--PROPOSAL has been completed.
- _____ Second sheet of SECTION 905--PROPOSAL has been completed and signed.
- _____ Addenda, if any, have been acknowledged. Second sheet of Section 905 listing the addendum number has been substituted for the original second sheet of Section 905. Substituted second sheet of Section 905 has been properly completed, signed, and added to the proposal.
- _____ DBE/WBE percentage, when required by contract, has been entered on last sheet of the bid sheets of SECTION 905--PROPOSAL.
- _____ Form OCR-485-LPA has been completed and signed.
- _____ The last sheet of the bid sheets of SECTION 905--PROPOSAL has been signed.
- _____ Equal Opportunity Clause Certification, when included in contract, has been completed and signed.
- _____ The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been executed in duplicate.
- _____ A certified check, cashier's check or bid bond payable to the Local Public Agency in the principle amount of 5% of the bid has been included with project number identified on same. Bid bond has been signed by the bidder and has also been signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent for the Surety with Power of Attorney attached.
- _____ The Notice to Bidders regarding DUNS Requirements has been completed and included in the contract documents.

Return the proposal and contract documents in its entirety in a sealed envelope. DO NOT remove any part of the contract documents; exception – an addendum requires substitution of second sheet of Section 905. A stripped proposal is considered as an irregular bid and will be rejected.

Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

CONTENTS

PROJECT: TUSCAN AVENUE SIDEWALK PROJECT
PROJECT NO. STP-7197-00(002)LPA/106879-701000
CITY OF HATTIESBURG, MISSISSIPPI

Bidder's Checklist

Section 901 - Advertisement for Bids

Section 904 - Notice to Bidders

#1:	Governing Specifications
#2LPA:	Designating Owner and Engineer
#3:	Final Cleanup
#151:	Gopher Tortoises
#640:	Fiber Reinforced Concrete
#1322:	Non-use of Precast Drainage Units
#1405:	Errata and Modifications to the 2004 Standard Specifications
#1546:	Advancement of Materials
#1902LPA:	Disadvantaged Business Enterprise Forms
#1928:	Federal Bridge Formula
#2168:	Fuel and Material Adjustments
#2382:	Status of Right of Way
#2382:	Attachments for Status of Right of Way
#4214:	Safety Apparel
#4488:	DBE Forms, Participation and Payment
#4565:	Manual on Uniform Traffic Control Devices
#4566:	DUNS Requirement
#5053:	Contractor Correspondence
#5266LPA:	Supplement to Disadvantage Business Enterprise
#5266:	Disadvantage Business Enterprise
#5405:	Traffic Control Devices
#5412:	Weight Limits
#5865LPA:	Sampling and Testing of Concrete on Small LPA Projects
#5866LPA:	Payroll Requirements
#7001:	Contract Time

Section 906 - County Wage Rates
Supplement to Form FHWA-1273
Required Federal Contract Provision Form FHWA-1273
Executive Order 11246

Section 907 -

907-101-4:	Definitions
907-102-4LPA:	Bidding Requirements and Conditions
907-103-11:	Award and Execution of Contract
907-104-5:	Scope of Work
907-105-8:	Control of Work

907-107-13:	Supplement to Legal Relations & Responsibility to Public
907-107-13:	Legal Relations & Responsibility to Public
907-108-37LPA:	Supplement to Prosecution and Progress
907-108-37LPA:	Prosecution and Progress
907-109-8:	Measurement and Payment
907-110-2:	Wage Rates
907-213-2:	Agricultural Limestone
907-216-1:	Solid Sodding
907-237-4:	Wattles
907-246-3:	Sandbags
907-601-1:	Structural Concrete
907-603-8:	Culverts and Storm Drains
907-618-13:	Temporary Construction Signs
907-626-25:	Thermoplastic Traffic Markings
907-701-5:	Supplement to Hydraulic Cement
907-701-5:	Hydraulic Cement
907-708-6:	Non Metal Drainage Structures
907-709-1:	Metal Pipe
907-711-4:	Synthetic Structural Fiber Reinforcement
907-713-6:	Admixtures for Concrete
907-714-8:	Miscellaneous Materials
907-715-4:	Roadside Development Materials
907-720-2:	Pavement Marking Materials
907-804-19:	Supplement to Concrete Bridges and Structures
907-804-19:	Concrete Bridges and Structures

Construction Progress Schedule

Section 905 - Proposal

- Proposal, Proposal Sheet
- Bid Sheets
- Certification of Performance – Prior Federal Aid Projects
- Affidavit Regarding Non-Collusion, Debarment and Suspension

Section 902 - Contract Form

Section 903 - Contract Bond Forms

Executive Compensation Certification

Guidance for Federal Spending Transparency

OCR-481-LPA – Disadvantaged Business Enterprise List

OCR-485-LPA – List of Firms Submitting Quotes

(Revisions to the Above Will Be Indicated on the Second Sheet of Section 905 as Addenda)

SECTION 901 - ADVERTISEMENT FOR BIDS

**CITY OF HATTIESBURG
FORREST COUNTY, MISSISSIPPI**

NOTICE TO CONTRACTORS

**TUSCAN AVENUE SIDEWALK PROJECT – FEDERAL-AID PROJECT NO.
STP 7197-00(002) LPA/106879-701000**

Sealed bids will be received by the City of Hattiesburg, at the City Clerk's office, located at 200 Forrest Street, Hattiesburg, Mississippi 39401, until 10:00 a.m. local time, on Thursday, October 27, 2016 for supplying all labor, equipment, and materials (as specified) necessary for the construction of the above referenced project. All bids so received will be publicly opened and read aloud.

Work consists of constructing an 8' wide concrete sidewalk along Tuscan Avenue from Martin Luther King Avenue to Cherry Street, along Tuscan Avenue from Arledge Street to Edwards Street, and a 6' wide concrete sidewalk along Tuscan Avenue from Cherry Street to Arledge Street, as well as, minor drainage improvements.

The above general outline of features of the work does not in any way limit the responsibility of the contractor to perform all work and furnish all plant, labor, equipment and materials required by the specifications and the drawings referred to therein.

Plans, contract documents and special provisions and proposal forms are on file for public inspection in the office of the City of Hattiesburg, City Clerk's Office located at 200 Forrest Street, Hattiesburg, Mississippi 39401 and in the office of Neel-Schaffer, Inc., Post Office Box 1487, Hattiesburg, MS 39403-1487 (704 Hardy Street, Telephone No. 601-545-1565). One copy of the contract documents and special provisions together with the contract plans may be procured from Neel-Schaffer, Inc. upon payment of \$100.00, none of which is refundable.

The attention of bidders is directed to the Special Provisions governing selection and employment of labor.

Minimum wage rates for Federal-Aid projects have been predetermined by the Secretary of Labor and are subject to Public Law 87-581 Work Hours Act of 1962, as set forth in the Special Provisions. Minimum wage rates for all other projects have been predetermined and set forth in advertised specifications.

The City of Hattiesburg hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged and women's business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The award of this contract will be contingent upon the Contractor satisfying the DBE/WBE requirements.

The 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction, adopted by the Mississippi Department of Transportation, as referred to herein, may be purchased from the Mississippi Department of Transportation.

Each bid shall be accompanied by a Certified Check on a solvent bank or a Bidder's Bond issued by a Surety Company licensed to operate in the State of Mississippi, in the amount of five percent (5%) of the total bid price, payable to the City of Hattiesburg as bid security. Bidders shall also submit a current financial statement, if requested by the City. The successful bidder will be required to furnish a performance and payment bond in the amount of 100 percent of the contract amount. Both bonds shall be signed or counter-signed by a Mississippi Resident Agent.

The proposal and contract documents in its entirety shall be submitted in a sealed envelope and deposited with the City Clerk, 200 Forrest Street, Hattiesburg, Mississippi prior to the hour and date above designated.

The City of Hattiesburg reserves the right to reject any or all proposals, to waive technicalities or irregularities, or to advertise for new proposals, and the decision of the City of Hattiesburg to reject any bid or proposal shall not be cause for any liability or damages against the City of Hattiesburg, any officers or employees.

The bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within the Contract Time. The bidder must also agree to pay as liquidated damages the sum specified in the Standard Specifications per day for each calendar day of overrun in Contract Time that work is not completed.

Work to be performed shall be in accordance with the "Mississippi State Highway Standard Specifications for Road and Bridge Construction, 2004", together with all amendments and/or special provisions and/or addenda to the standards duly approved and adopted, unless otherwise noted in these specifications.

The attention of Bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.



City Clerk
City of Hattiesburg, Mississippi

Dates of Publication:

September 25, 2016

October 2, 2016

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:*(Name, legal status and address)*

**RJM-McQueen Contracting, Inc.
80 Ramsey McQueen Road
Collins, MS 39428**

SURETY:*(Name, legal status and principal place of business)*

**U.S. Specialty Insurance Company
13403 Northwest Freeway
Houston, TX 77040-6094**

OWNER:*(Name, legal status and address)*

**City of Hattiesburg
200 Forrest Street
Hattiesburg, MS 39401**

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

BOND AMOUNT: Five Percent (5%) of the Amount Bid-----

PROJECT:*(Name, location or address, and Project number, if any)*

**Tuscan Avenue Sidewalk Project
Federal Aid Project No. STP 7197-00(002)LPA/106879-701000
for the City of Hattiesburg, Forrest County, Hattiesburg, Mississippi**

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this **27th** day of **October**, 2016

Pamela Griffith
(Witness)

RJM-McQueen Contracting, Inc.

(Contractor as Principal)

(Seal)

(Title)

President

Darlene Shady
(Witness)

U.S. Specialty Insurance Company

(Surety)

(Seal)

(Title)

Kathleen B. Scarborough
Kathleen B. Scarborough, Attorney-In-Fact
MS Resident Agent

POWER OF ATTORNEY

AMERICAN CONTRACTORS INDEMNITY COMPANY TEXAS BONDING COMPANY
UNITED STATES SURETY COMPANY U.S. SPECIALTY INSURANCE COMPANY

KNOW ALL MEN BY THESE PRESENTS: That American Contractors Indemnity Company, a California corporation, Texas Bonding Company, an assumed name of American Contractors Indemnity Company, United States Surety Company, a Maryland corporation and U.S. Specialty Insurance Company, a Texas corporation (collectively, the "Companies"), do by these presents make, constitute and appoint:

**Jim E. Brashier, Troy P. Wagener, Loren Richard Howell, Jr., Dewey Brashier,
Kathleen B. Scarborough, Susan Skrmetta**

its true and lawful Attorney(s)-in-fact, each in their separate capacity if more than one is named above, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include riders, amendments, and consents of surety, providing the bond penalty does not exceed *****Unlimited***** Dollars (\$ ***unlimited***).

This Power of Attorney shall expire without further action on December 20, 2017. This Power of Attorney is granted under and by authority of the following resolutions adopted by the Boards of Directors of the Companies:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings, including any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts, and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached.

IN WITNESS WHEREOF, The Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 1st day of December, 2014.

AMERICAN CONTRACTORS INDEMNITY COMPANY TEXAS BONDING COMPANY
UNITED STATES SURETY COMPANY U.S. SPECIALTY INSURANCE COMPANY

Corporate Seals



By:


Daniel P. Aguilar, Vice President

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Los Angeles SS:

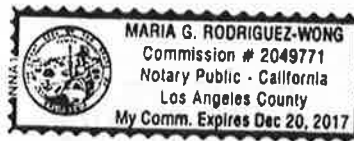
On this 1st day of December, 2014, before me, Maria G. Rodriguez-Wong, a notary public, personally appeared Dan P. Aguilar, Vice President of American Contractors Indemnity Company, Texas Bonding Company, United States Surety Company and U.S. Specialty Insurance Company who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature



(Seal)



I, Kio Lo, Assistant Secretary of American Contractors Indemnity Company, Texas Bonding Company, United States Surety Company and U.S. Specialty Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Companies, which is still in full force and effect; furthermore, the resolutions of the Boards of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seals of said Companies at Los Angeles, California this 27th day of October, 2016.

Corporate Seals



Kio Lo, Assistant Secretary

Bond No. N/A
Agency No. 17033

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Governing Specifications

The current (2004) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation Commission is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained herein. Copies of the specification book may be purchased from the MDOT Construction Division.

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal contain references to the 1990 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2004 Edition of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 2 LPA

CODE: (SP)

DATE: 02/03/2015

SUBJECT: Designating Owner and Engineer (Hattiesburg, Mississippi)

PROJECT: STP-7197-00(002) /106879-701000, Forrest County

Any reference in the Contract Documents to the State of Mississippi, Mississippi Department of Transportation, Mississippi Transportation Commission, or any official thereof shall be interpreted to mean *City of Hattiesburg*, the "Owner".

Any reference in the Standard Specifications to the Project Engineer, District Engineer, Office Engineer, or Engineer shall be interpreted to mean the *Engineer for City of Hattiesburg, Mississippi, Neel-Schaffer, Inc.*

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3

CODE: (SP)

DATE: 05/03/2004

SUBJECT: Final Clean-Up

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such as glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 151

CODE: (IS)

DATE: 06/18/2004

SUBJECT: Gopher Tortoises

Bidders are hereby advised that the Contractor will be required to make special considerations regarding gopher tortoises on this project. In addition to the normal required documentation associated with borrow pits, the Contractor shall, for each site used to obtain or dispose of materials associated with this project, provide the Engineer with a letter from a qualified biologist certifying that the site was inspected prior to any clearing of vegetation or disposal of project materials and that the site is not inhabited by gopher tortoises, or appropriate avoidance measures have been installed. No individual lacking the proper State or Federal license shall touch or otherwise harass a gopher tortoise.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 640

CODE: (IS)

| DATE: 09/26/2005

SUBJECT: Fiber Reinforced Concrete

Bidders are hereby advised that synthetic structural fibers meeting the requirements of Subsection 907-711.04 may be used in lieu of wire mesh in some items of construction. Substitution of fibers for wire mesh will be allowed in the construction of paved ditches, paved flumes, paved inlet apron, driveways, guard rail anchors and pile encasements. Substitution in any other items of work must be approved by the State Construction Engineer prior to use.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1322

CODE: (SP)

DATE: 1/22/2007

SUBJECT: Non-Use of Precast Drainage Units

Bidders are hereby advised that the use of precast inlets and junction boxes will **NOT** be allowed on this project. Subsection 601.02.3 states that " the Contractor may request approval from the Engineer to furnish and install precast units in lieu of cast-in-place units". Should the Contractor make this request, the request will be denied.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1405

CODE: (IS)

DATE: 03/15/2007

SUBJECT: ERRATA AND MODIFICATIONS TO THE 2004 STANDARD SPECIFICATIONS

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
101	201.01	In the second sentence of the first paragraph, change “salvable” to “salvageable”.
107	202.04	In the fourth sentence of the fourth paragraph, change “yard” to “feet”.
107	202.05	In the list of units measurements for 202-B, add “square foot”.
132	211.03.4	In the second sentence of the second paragraph, change “planted” to “plated”.
192	306.02.4	In the first line of the first paragraph, delete the word “be”.
200	307.03.7	In the fourth sentence of the second paragraph, change “lime-fly ash” to “treated”.
236	401.01	Change the header from “Section 403” to “Section 401”.
242	401.02.3.2	In the first sentence of the third full paragraph, add “1/8” in the blank before the inch mark.
250	401.02.6.3	In the second sentence of the first paragraph on page 250, change “rutting over ” ” to “rutting over 1/8" ”.
253	401.02.6.4.2	In the paragraph preceding the table, change “91.0” to “89.0”.
259	401.03.1.4	In the first paragraph, change “92.0 percent” to “the specified percentage (92.0 or 93.0)”.
269	403.03.2	In the table at the top of page 269, change the PI requirement from “ = ” to “ ≤ ”.

278	404.04	In the second sentence, change the subsection from "401.04" to "403.04".
283	409.02.2	Change "PG 64-22" to "PG 67-22".
294	413.02	In the first sentence of the second paragraph, change "707.02.1.3" to "Subsection 707.02.1.3".
340	511.04	In the second sentence of the second paragraph, change "412" to "512".
349	601.03.3	In the first sentence, change "804.03.2" to "804.03.5".
355	603.02	Change the subsection reference for Joint mortar from "707.03" to "714.11".
369	604.04	In the first sentence, change "601.04" to "Subsection 601.04".
427	619.04	Delete the second paragraph.
442	625.04	In the third paragraph, change "626.04" to "Subsection 626.04".
444	626.03.1.2	Delete the third sentence of the first paragraph.
464	631.02	Change the subsection reference for Water from "714.01.0" to "714.01.1".
570	682.03	Change the subsection number from "682-03" to "682.03".
575	683.10.4	Change the subsection number from "683.10.4" to "683.04".
575	683.10.5	Change the subsection number from "683.10.5" to "683.05".
596	701.02	In the table under the column titled "Cementations material required", change Class F, FA" to "Class F FA,".
603	702.11	In the first sentence, change "702.12" to "Subsection 702.12".
612	703.04.2	In the fifth paragraph, delete "Subsection 703.11 and".
616	703.07.2	In the Percentage By Weight Passing Square Mesh Sieves table, change the No. 10 requirement for Class 7 material from "30 - 10" to "30 - 100".

618	703.13.1	In the first sentence of the first paragraph, change “703.09” to “703.06”.
618	703.13.2	In the first sentence, change “703.09” to “703.06”.
671	712.06.2.2	In the first sentence, change “712.05.1” to “Subsection 712.05.1”.
689	714.11.2	In the first sentence, change “412” to “512”.
709	715.09.5	In the first sentence of the first paragraph, change “guage” to “gauge”.
717	717.02.3.4	In the top line of the tension table, change “1 1/2” to “1 1/8” and change “1 1/8” to “1 1/2”.
741	720.05.2.2	In the last sentence of this subsection, change “720.05.2.1” to “Subsection 720.05.2.1”.
827	803.03.2.3.7.5.2	In the first sentence of the second paragraph, change “803.03.5.4” to “803.03.2.3.4”.
833	803.03.2.6	In the first sentence, change “803.03.7” to “803.03.2.5”.
854	804.02.11	In the last sentence of the first paragraph, change “automatically” to “automatic”.
859	804.02.13.1.3	In the last sentence, change Subsection “804.02.12.1” to “804.02.12”.
879	804.03.19.3.2	In the first sentence of the third paragraph, change “listed on of Approved” to “listed on the Approved”.
879	804.03.19.3.2	In the last sentence of the last paragraph, change “804.03.19.3.1” to “Subsection 804.03.19.3.1”.
962	814.02.3	In the first sentence, change “710.03” to “Subsection 710.03”.
976	820.03.2.1	In the first sentence, change “803.02.6” to “803.03.1.7”.
976	820.03.2.2	In the first sentence, change “803.03.9.6” to “803.03.1.9.2”.
985	Index	Change the subsection reference for Petroleum Asphalt Cement from “702.5” to “702.05”.

985	Index	Change the subsection reference for the Definition of Asphaltic Cement or Petroleum Asphalt from "700.2" to "700.02".
985	Index	Change the subsection reference for Automatic Batchers from "501.03.2.4" to "804.02.10.4".
986	Index	Delete "501.03.2" as a subsection reference for Batching Plant & Equipment.
988	Index	Change the subsection reference for the Central Mixed Concrete from "501.03.3.2" to "804.02.11".
988	Index	Change the subsection reference for the Concrete Batching Plant & Equipment from "501.03.2" to "804.02.11".
999	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers.
1001	Index	Change the subsection reference for Edge Drain Pipes from "605.3.5" to "605.03.5".
1002	Index	Change the subsection reference for Metal Posts from "713.05.2" to "712.05.2".
1007	Index	Change the subsection reference for Coarse Aggregate of Cement Concrete Table from "703.3" to "703.03".
1007	Index	Change the subsection reference for Composite Gradation for Mechanically Stabilized Courses Table from "703.8" to "703.08".
1009	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers and Truck Agitators.
1010	Index	Delete reference to "Working Day, Definition of".

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1546

CODE: (SP)

DATE: 05/23/2007

SUBJECT: Advancement of Materials

Bidders are advised that **NO ADVANCEMENT OF MATERIALS**, as addressed in Subsection 109.06.2 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1902 LPA

CODE: (SP)

DATE: 02/26/2010

SUBJECT: Disadvantaged Business Enterprise (DBE) Forms

Anywhere in the plans, proposal and specifications where reference is made to Office of Civil Rights (OCR) Forms, it should be understood to mean Disadvantaged Business Enterprise (DBE) Forms.

The following are equivalent forms:

OCR-481	.....	OCR-481 LPA	.....	DBE-1
OCR-482	.....	OCR-482 LPA	.....	DBE-2
OCR-483	.....	OCR-483 LPA	.....	DBE-3
OCR-484	.....	OCR-484 LPA	.....	DBE-4
OCR-485	.....	OCR-485 LPA	.....	DBE-5
OCR-487	.....	OCR-487 LPA	.....	DBE-7

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 1928

CODE: (IS)

| DATE: 04/14/2008

SUBJECT: Federal Bridge Formula

Bidders are hereby advised that Federal Highway Administration Publication No. FHWA-MC-94-007, **BRIDGE FORMULA WEIGHTS**, dated January 1994, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration
400 7th Street, SW
Washington, DC 20590
(202) 366-2212

or

| http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc_page.htm

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2168

CODE: (SP)

DATE: 11/03/2008

SUBJECT: Fuel and Material Adjustments

Bidders are advised that **NO FUEL OR MATERIAL ADJUSTMENT**, as addressed in Subsection 109.07 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 2382

CODE: (IS)

| DATE: 02/12/2009

| SUBJECT: Status of Right-of-Way

Although it is desirable to have acquired all rights-of-way and completed all utility adjustments and work to be performed by others prior to receiving bids, sometimes it is not considered to be in the public interest to wait until each and every such clearance has been obtained. The bidder is hereby advised of possible unacquired rights-of-way, relocatees and utilities which have not been completed.

| The status of right-of-way acquisition, utility adjustments, [encroachments](#), potentially contaminated sites [and asbestos containment](#) are set forth in [the following](#) attachments.

In the event right of entry is not available to ALL parcels of right-of-way and/or all work that is to be accomplished by others on the date set forth in the contract for the Notice to Proceed is not complete, the Department will issue a restricted Notice to Proceed.

Mark C. McConnell
Deputy Executive Director/
Chief Engineer

Charles R. Carr
Director
Office of Intermodal Planning



Melinda L. McGrath
Executive Director

Lisa M. Hancock
Deputy Executive Director/
Administration

Willie Huff
Director
Office of Enforcement

P. O. Box 1850 / Jackson, MS 39215-1850 / Telephone (601) 359-7001 / FAX (601) 359-7110 / GoMDOT.com

June 2, 2015

Mr. Andrew Hughes
Division Administrator
FHWA-Mississippi Division
100 West Capitol Street, Suite 1062
Jackson, MS 39269

RE: STP-7197-00(002) LPA
106879-701000
Tuscan Avenue Sidewalk Project
City of Hattiesburg
Forrest County

Dear Mr. Hughes:

RIGHT-OF-WAY CERTIFICATION

This project will be constructed on existing right of way or other real property previously acquired and owned by the above referenced city, county or agency. Since no additional acquisition of right of way or other real property interests are required, there are no relocatees, improvements or contaminated sites involved in this project.

Attached:

Status of Right of Way
Encroachment Status
Hazardous Waste Status
Asbestos Abatement Status
Utility Status

Mr. Andrew Hughes
June 2, 2015
Page 2

Very truly yours,

RIGHT OF WAY DIVISION

A handwritten signature in cursive script that reads "Stephen D. Downing".

Stephen D. Downing
Assistant Division Administrator

DD:ar

Pc: Chief Engineer (65-01)
LPA Division (77-01)
Construction Engineer (73-01)
District Six (26-01)
Project Engineer (26-01 PE)
Facility & Records Management (89-20)

**STATUS OF RIGHT-OF-WAY
STP-7197-00(002) LPA
106879-701000
Tuscan Avenue Sidewalk Project
FORREST COUNTY
June 2, 2015**

All rights of way and legal rights of entry have been acquired except:

Exceptions: Utilities in conflict with the project construction will be adjusted as follows: 1) AT&T phone lines to be transferred to new poles prior to construction with completion date by 9-15-15; 2) Old utility poles to be removed prior to construction with a completion date by 9-30-15



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

RIGHT-OF-WAY STATUS REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

There is no right-of-way required for this project. All work shall be completed within the limits of the existing right-of-way.

The City of Hattiesburg certifies that, the real property interest acquired for the project is adequate for the construction, operation, and maintenance of the resulting facility and for the protection of both the facility and the traveling public.

Signed:

A handwritten signature in dark ink, appearing to read "Lamar Rutland".

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Brudley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

RIGHT-OF-WAY ENCROACHMENT REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

This is to certify that a physical survey of the right-of-ways to be used in the construction of this project revealed that there are no encroachments on the subject project.

The City of Hattiesburg (LPA) certifies that any encroachments that remain in place shall not cause delays to construction of the project, nor shall inhibit maintenance of traffic or constitute safety hazards to the public. The LPA certifies that the LPA will accept full financial responsibility for any damage caused, or delay claims that arise in the whole or in part due to the failure of the LPA to remove the encroachments. Any additional construction cost incurred as a result of working around these encroachments will be paid by the LPA as a non-reimbursable expense. The safety of the public will not be comprised as a result of not moving the encroachments. Future maintenance of the project will not be adversely affected by the encroachments.

Signed:

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

HAZARDOUS WASTE SITE REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

This is to certify that a physical survey of the right-of-ways to be used in the construction of this project revealed that there are no areas suspected of having any hazardous waste or underground storage tanks.

Signed

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

ASBESTOS ABATEMENT REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

This is to certify that the project components do not contain any known asbestos containing materials.

Signed:

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

UTILITY REPORT/CERTIFICATION

Forrest County, Mississippi
Project No. STP-7197-00(002) LPA/106879-701000
Tuscan Avenue Sidewalk Project

May 28, 2015

The status of utilities are as follows:

AT&T – Phone lines to be transferred to new poles prior to construction with a completion date by 9/15/2015.

Old utility poles to be removed prior to construction with a completion date by 9/30/2015.

This is to certify that arrangements have been made as indicated above for the adjustment of all utility facilities as required for coordination with the physical construction schedules. As noted, the Contractor's operations should not be adversely affected.

The City of Hattiesburg understands that any claim by the contractor due to NOT having the utilities relocated will be a non-participating item. In the event the utility facilities are discovered to be in conflict, damaged, or otherwise impact the proposed construction, the LPA shall bare all responsibility and/or claims associated with these facilities. Furthermore, the LPA shall indemnify and hold harmless the Mississippi Department of Transportation, the Mississippi Transportation Commission, and its representatives in the event that damages and/or claims should arise.

There are no other known utilities in conflict with the proposed project.

Signed:

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
Inter-Departmental Memorandum

TO: Mr. David Seyfarth
District LPA Engineer (16-10)

DATE: May 29, 2015

FROM: Mr. Jared Brogan
Hattiesburg Project Office (16-13)

SUBJECT OR PROJECT NO: STP-7197-00(002)LPA/106879-701000
Tuscan Avenue Sidewalk Project
City of Hattiesburg

COUNTY: Forrest

INFORMATION COPY TO:

Jeff Altman- State LPA Engineer (77-01)
Kelly Castleberry- District 6 Engineer (26-01)
Ashlyn Brock- Right of Way Officer (26-01)

Geoffrey Crosby-Neel-Schaffer, Inc.
Lamar Rutland-City of Hattiesburg
Project File (16-13)

STATUS OF UTILITY RELOCATION WORK

AT&T: The identified conflicts will be addressed prior to construction by the owner with the telephone lines transferred to new poles by September 15, 2015 and the old poles removed by September 30, 2015.

There are no other known utility conflicts at this time.

This is to certify that any required adjustments to facilities owned by the above mentioned utility companies have been completed to the best of my knowledge and are acceptable in accordance with the terms of the agreement between the owner and the LPA. Said adjustments are located within the limits of the above mentioned LPA project.



Jared Brogan
Utility Coordinator (16-13)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 4214

CODE: (IS)

| DATE: 11/29/2012

SUBJECT: Safety Apparel

Bidders are advised that the Code of Federal Regulations CFR 23 Part 634 final rule was adopted November 24, 2006 with an effective date of November 24, 2008. This rule requires that "All workers within the right-of-way of a Federal-Aid Highway who are exposed either to traffic (vehicles using the highway for the purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel". High-visibility safety apparel is defined in the CFR as "personnel protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2004 publication entitled American National Standard for High-Visibility Safety Apparel and Headwear". All workers on Mississippi State Highway right-of-way shall comply with this Federal Regulation. Workers are defined by the CFR as "people on foot whose duties place them within the right-of way of a Federal-Aid Highway, such as highway construction and maintenance forces, survey crews, utility crews, responders to incidents within the highway right-of-way, and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way of a Federal-Aid Highway".

| More information regarding high visibility safety apparel can be found at the following sites.

<http://www.gpo.gov/fdsys/pkg/CFR-2008-title23-vol1/pdf/CFR-2008-title23-vol1-sec634-1.pdf>

<http://ops.fhwa.dot.gov/wz/resources/policy.htm#hv>

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4488 LPA

CODE: (IS)

DATE: 05/01/2013

SUBJECT: DBE Forms, Participation and Payment

Bidders are hereby advised that the participation of a DBE Firm cannot be counted towards the Prime Contractor's DBE goal until the amount being counted towards the goal has been paid to the DBE.

Form OCR-482-LPA has been developed to comply with this requirement. Bidders are hereby advised that at the end of the job, the Prime Contractor will submit this form to the Project Engineer before the final estimate is paid and the project is closed out. This form certifies payments to all DBE Subcontractors over the life of the contract.

Form OCR-484-LPA has also been developed to comply with this requirement. Bidders are hereby advised that each month, the Prime Contractors will submit this form to the Project Engineer no later than the last day of each month. This form certifies payments to all Subcontractors and shows all firms even if the Prime Contractor has paid no monies to the firm during that estimate period (negative report). The Project Engineer will attach this form to the monthly estimate before forwarding the estimate to the Local Public Agency (LPA) Division for processing.

Bidders are also advised that Form OCR-485-LPA will be completed by ALL BIDDERS submitting a bid proposal and must be signed and included in the bid proposal package. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

DBE Forms, including Forms OCR-482-LPA, OCR-484-LPA and OCR-485-LPA, can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at www.gomdot.com under *Business, Disadvantaged Enterprise, Applications and Forms for the DBE Program, MDOT Forms*.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4565

CODE: (SP)

DATE: 06/27/2013

SUBJECT: Manual on Uniform Traffic Control Devices

Any reference in the Standard Specifications or contract documents to a particular Section of the Manual on Uniform Traffic Control Devices (MUTCD) it shall mean that Section of the latest version of the Manual on Uniform Traffic Control Devices.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4566

CODE: (SP)

DATE: 07/02/2013

SUBJECT: DUNS Requirement for Federal Funded Projects

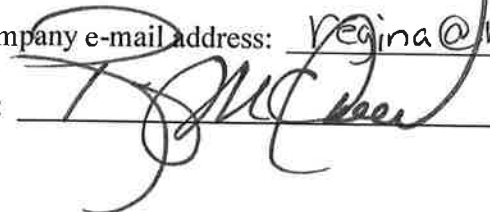
Bidders are advised that the Prime Contractor must maintain current registrations in the Central Contractor Registration (<http://www.sam.gov>) at all times during this project. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (<http://www.dnb.com>) is one of the requirements for registration in the Central Contractor Registration.

Bidders are also advised that the following information needs to be completed and included in the bid documents:

DUNS: 062646948

Company Name: RJM-McQueen Contracting, Inc.

Company e-mail address: Regina@rjmmcqueen.com

By: 

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5053

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Contractor Correspondence

Bidders are advised that all correspondence concerning this project, other than correspondence related to the execution of the contract and sub-contracting, shall be sent to the Project Engineer. The Project Engineer will then forward any necessary correspondence to the appropriate Division. This includes general correspondence, submittals, shop drawings, requests for advancement of materials, etc.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO NOTICE TO BIDDERS NO. 5266 LPA

DATE: 11/15/2014

The goal is 3% percent for the Disadvantaged Business Enterprise. The low bidder is required to submit Form OCR-481 for all DBEs.

Delete the third paragraph under CONTRACT GOAL on page 2, and substitute the following.

The apparent lowest responsive bidder shall submit to the LPA Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 3rd business day after opening of the bids.

LPA Projects: Delete entire Pre-Bid Section at the top of page 6.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5266

CODE: (IS)

| DATE: 11/12/2014

**SUBJECT: DISADVANTAGED BUSINESS ENTERPRISES IN FEDERAL-AID
HIGHWAY CONSTRUCTION**

This contract is subject to the "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations". Portions of the Act are set forth in this Notice as applicable to compliance by the Contractor and all of the Act, and the MDOT DBE Program, is incorporated by reference herein.

The Department has developed a Disadvantaged Business Enterprise Program that is applicable to this contract and is made a part thereof by reference.

Copies of the program may be obtained from:

Office of Civil Rights
Mississippi Department of Transportation
P. O. Box 1850
Jackson, Mississippi 39215-1850

POLICY

It is the policy of the Mississippi Department of Transportation to provide a level playing field, to foster equal opportunity in all federally assisted contracts, to improve the flexibility of the DBE Program, to reduce the burdens on small businesses, and to achieve that amount of participation that would be obtained in a non-discriminatory market place. In doing so, it is the policy of MDOT that there will be no discrimination in the award and performance of federally assisted contracts on the basis of race, color, sex, age, religion, national origin, or any handicap.

ASSURANCES THAT CONTRACTORS MUST TAKE

MDOT will require that each contract which MDOT signs with a sub-recipient or a Contractor, and each subcontract the Prime Contractor signs with a Subcontractor, includes the following assurances:

“The Contractor, subrecipient or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MDOT deems appropriate.”

DEFINITIONS

For purposes of this provision the following definitions will apply:

"Disadvantaged Business" means a small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individual(s) or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individual(s); and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individual(s) who own it. It is important to note that the business owners themselves must control the operations of the business. Absentee ownership or title ownership by an individual who does not take an active role in controlling the business is not consistent with eligibility as a DBE under CFR 49 Part 26.71.

CONTRACTOR'S OBLIGATION

The Contractor and all Subcontractors shall take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of a portion of the work in this contract and shall not discriminate on the basis of race, color, national origin, religion or sex. Failure on the part of the Contractor to carry out the DBE requirements of this contract constitutes a breach of contract and after proper notification the Department may terminate the contract or take other appropriate action as determined by the Department.

When a contract requires a zero percent (0%) DBE goal, the Contractor still has the responsibility to take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of the work in the contract. In this case, all work performed by a certified DBE firm is considered to be a "race neutral" measure and the Department will receive DBE credit towards the overall State goals when the DBE firm is paid for their work. If the Prime Contractor is a certified DBE firm, the Department can receive DBE credit only for the work performed by the Prime Contractor's work force or any work subcontracted to another DBE firm. Work performance by a non-DBE Subcontractor is not eligible for DBE credit.

CONTRACT GOAL

The goal for participation by DBEs is established for this contract in the attached Supplement. The Contractor shall exercise all necessary and reasonable steps to ensure that participation is equal to or exceeds the contract goal.

The percentage of the contract that is proposed for DBEs (1% or greater) shall be so stated on the last bid sheet of the proposal.

The apparent lowest responsive bidder shall submit to the Office of Civil Rights Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 3rd business day after opening of the bids.

Form OCR-481 is available on the MDOT website at GoMDOT.com, then Divisions, Civil Rights, Forms, DBE, MDOT Projects, or by calling 601-359-7466.

FORMS ARE AVAILABLE FROM THE OFFICE OF CIVIL RIGHTS

The OCR-481 Form must contain the following information:

The name and address of each certified DBE Contractor / Supplier;

The Reference Number, percent of work and the dollar amount of each item. If a portion of an item is subcontracted, a breakdown of that item including quantities and unit price must be attached, detailing what part of the item the DBE firm is to perform and who will perform the remainder of the item.

If the DBE Commitment shown on the last bid sheet of the proposal, does not equal or exceed the contract goal, the bidder must submit, with the proposal, information to satisfy the Department that adequate good faith efforts have been made to meet the contract goal.

Failure of the lowest bidder to furnish acceptable proof of good faith efforts, submitted with the bid proposal, shall be just cause for rejection of the proposal. Award may then be made to the next lowest responsive bidder or the work may be readvertised.

The following factors are illustrative of matters the Department will consider in judging whether or not the bidder has made adequate good faith effort to satisfy the contract goal.

- (1) Whether the bidder attended the pre-bid meeting that was scheduled by the Department to inform DBEs of subcontracting opportunities;
- (2) Whether the bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
- (3) Whether the bidder provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;
- (4) Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested;
- (5) Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goal;
- (6) Whether the bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
- (7) Whether the bidder negotiated in good faith with interested DBEs and did not reject them as unqualified without sound reasons based on a thorough investigation of their capabilities; and

- (8) Whether the bidder made efforts to assist interested DBEs in obtaining any required bonding or insurance.
- (9) Whether the bidder has written notification to certified DBE Contractors soliciting subcontracting for items of work in the contract.
- (10) Whether the bidder has a statement of why an agreement was not reached.

The bidder's execution of the signature portion of the proposal shall constitute execution of the following assurance:

The bidder hereby gives assurance pursuant to the applicable requirements of "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations" that the bidder has made a good faith effort to meet the contract goal for DBE participation for which this proposal is submitted.

DIRECTORY

A list of "Certified DBE Contractors" which have been certified as such by the Mississippi Department of Transportation and other Unified Certification Partners (UPC) can be found on the Mississippi Department of Transportation website at www.gomdot.com. The DBE firm must be certified at the time the project is let and approved by MDOT to count towards meeting the DBE goal.

REPLACEMENT

If a DBE Subcontractor cannot perform satisfactorily, and this causes the OCR-481 commitment to fall below the contract goal, the Contractor shall take all necessary reasonable steps to replace the DBE with another certified DBE Subcontractor or submit information to satisfy the Mississippi Department of Transportation that adequate good faith efforts have been made to replace the DBE. The replacement DBE must be a DBE who was on the Department's list of "Certified DBE Contractors" when the job was let, and who is still active. All DBE replacements must be approved by the Department.

Under no circumstances shall the Prime or any Subcontractor perform the DBE's work (as shown on the OCR-481) without prior written approval from the Department. See "Sanctions" at the end of this document for penalties for performing DBE's work.

When a Contractor proposes to substitute/replace/terminate a DBE that was originally named on the OCR-481, the Contractor must obtain a release, in writing, from the named DBE explaining why the DBE Subcontractor cannot perform the work. A copy of the original DBE's release must be attached to the Contractor's written request to substitute/replace/terminate along with appropriate Subcontract Forms for the substitute/replacement/terminated Subcontractor, all of which must be submitted to the DBE Coordinator and approved, in advance, by MDOT.

GOOD FAITH EFFORTS

To demonstrate good faith efforts to replace any DBE that is unable to perform successfully, the Contractor must document steps taken to subcontract with another certified DBE Contractor. Such documentation shall include no less than the following:

- (1) Proof of written notification to certified DBE Contractors by certified mail that their interest is solicited in subcontracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.
- (2) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (3) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (4) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (5) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (6) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (7) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (8) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

Failure of the Contractor to demonstrate good faith efforts to replace a DBE Subcontractor that cannot perform as intended with another DBE Subcontractor, when required, shall be a breach of contract and may be just cause to be disqualified from further bidding for a period of up to 12 months after notification by certified mail.

PRE-BID MEETING

A pre-bid meeting will be held in Amphitheater 1 & 2 of the Hilton Jackson located at I-55 and County Line Road, Jackson, Mississippi at 2:00 P.M. on the day preceding the date of the bid opening.

This meeting is to inform DBE firms of subcontracting and material supply opportunities. Attendance at this meeting is considered of prime importance in demonstrating good faith effort to meet the contract goal.

PARTICIPATION / DBE CREDIT

Participation shall be counted toward meeting the goal in this contract as follows:

- (1) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (2) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (3) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (4) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (5) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (6) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (7) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

AWARD

Award of this contract to the low bidder will be contingent upon the following conditions:

- (1) Concurrence from Federal Highway Administration, when applicable.
- (2) Bidder must submit to the Office of Civil Rights for approval, Form OCR-481 (DBE Commitment) no later than the 3rd business day after opening of the bids, or submit information with the bid proposal to satisfy the Department and that adequate good faith efforts have been made to meet the contract goal. For answers to questions regarding Form OCR-481, contact the MDOT Office of Civil Rights at (601) 359-7466.
- (3) Bidder must submit an OCR-485 listing all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. Form OCR-485 must be signed and submitted with the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

Prior to the start of any work, the bidder must notify the Project Engineer, in writing, of the name of the designated "DBE Liaison Officer" for this project. This notification must be posted on the bulletin board at the project site.

DEFAULT

The contract goal established by MDOT in this proposal of 1% or greater must be met to fulfill the terms of the contract. The Contractor may list DBE Subcontractors and items that exceed MDOT's contract goal, but should unforeseen problems arise that would prevent a DBE from completing its total commitment percentage, the Contractor will meet the terms of the contract as long as it meets or exceeds MDOT's Contract Goal. For additional information, refer to "Replacement" section of this Notice.

DBE REPORTS

- (1) OCR-481: Refer to "CONTRACT GOAL" section of this Notice to Bidders for information regarding this form.
- (2) OCR-482: At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form OCR-482 whereby the Contractor certifies to the amounts of payments made to each Contractor / Supplier. The Project Engineer shall submit the completed Form OCR-482 to the DBE Coordinator (Office of Civil Rights). Final acceptance of the project is dependent upon Contract Administration Division's receipt of completed Form OCR-482 which they will receive from the Office of Civil Rights.
- (3) OCR-483: The Project Engineer/Inspector will complete Form OCR-483, the Commercially Useful Function (CUF) Performance Report, in accordance with MDOT

S.O.P. No. OCR-03-09-01-483. Evaluations reported on this form are used to determine whether or not the DBE firm is performing a CUF. The Prime Contractor should take corrective action when the report contains any negative evaluations. DBE credit may be disallowed and/or other sanctions imposed if it is determined the DBE firm is not performing a CUF. This form should also be completed and returned to the DBE Coordinator (Office of Civil Rights).

- (4) OCR-484: Each month, the Contractor will submit to the Project Engineer OCR-484 certifying payments to all Subcontractors. This OCR-484 will be attached to the monthly estimate for further processing. Failure of the Contractor to submit the OCR-484 will result in the estimate not being processed or paid.
- (5) OCR-485: Bidder must submit signed form with bid proposal of all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.
- (6) OCR-487: Only used by Prime Contractors that are certified DBE firms. This form is used in determining the exact percentage of DBE credit for the specified project. It should be returned to MDOT with the OCR-481 form, or can also be returned with the Permission to Subcontract Forms (CAD-720, CAD-725 and CAD-521).

SANCTIONS

The Department has the option to enforce any of the following penalties for failure of the Prime Contractor to fulfill the DBE goal as stated on the OCR-481 form or any violations of the DBE program guidelines:

- (1) Disallow credit towards the DBE goal
- (2) Withhold progress estimate payments
- (3) Deduct from the final estimate or recover an amount equal to the unmet portion of the DBE goal which may include additional monetary penalties as outlined below based on the number of offenses and the severity of the violation as determined by MDOT.

1 st Offense	10% of unmet portion of goal	or	\$5,000 lump sum payment	or	Both
2 nd Offense	20% of unmet portion of goal	or	\$10,000 lump sum payment	or	Both
3 rd Offense	40% of unmet portion of goal	or	\$20,000 lump sum payment	or	\$20,000 lump sum payment and debarment
- (4) Debar the Contractor involved from bidding on Mississippi Department of Transportation projects.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5405

CODE: (SP)

| DATE: 02/11/2015

SUBJECT: Traffic Control Devices

Bidders are advised of the following two changes regarding traffic control devices.

Flashing Arrow Panels

| In Subsection 619.02.5 of the Standard Specifications, it states that flashing arrow panels shall meet the requirements of Section 6F.53 of the MUTCD. The new MUTCD has changed this reference to Section 6F.61. Flashing arrow panels on this project must meet the requirements of Section 6F.61 of the latest MUTCD.

Type III Barricade Rails

The use of 2-inch nominal thickness timber for rails on Type III barricades has not been approved by NCHRP as a crashworthy device. Therefore, the use of 2-inch nominal thickness timbers will not be allowed for rails on Type III Barricades. Timber rails for Type III Barricades shall be as follows.

- For barricades up to four feet (4') wide, the maximum thickness of timber rails shall be one inch (1") and the material shall be pine timber or ¾-inch ACX plywood.
- For barricades more than four feet (4') wide, timber rails shall be constructed of ¾-inch ACX plywood.

A list of crashworthy Type III Barricades can be found at the below FHWA website.

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5412

CODE: (SP)

DATE: 02/18/2015

SUBJECT: Weight Limits

Bidders are hereby advised that all trucks hauling materials to and from this project shall comply with the legal weight limits as established by law. MDOT will not compensate the Contractor for any portion of a load delivered to the project in excess of the legal limit for that truck.

Vehicles relying on harvest permits are limited to hauling only those materials set forth in Section 27-19-81(4) of the Mississippi Code, as amended.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5865 LPA

CODE: (SP)

DATE: 11/30/2015

SUBJECT: Sampling and Testing of Concrete on Small LPA Projects

Bidders are advised that the following concrete items will be tested at a reduced amount and will not be accepted based on the Quality Control / Quality Assurance (QC/QA) requirements of Section 804 of the specifications.

<u>Section</u>	<u>Description</u>
221	Paved Ditches
601	Minor Structures - manholes, inlets, catch basins, junction boxes, pipe headwalls, and pipe collars.
605	Edge Drain and Underdrain Outlet Pads
606	Guardrail Anchors
607	Fence Post Footings
608	Sidewalks
609	Curb and Gutter
614	Driveways
616	Median and Island Pavement
630	Sign Footings, except Overhead Sign Supports

The material requirements for the above pay items are as follows:

1. Cement and aggregates for concrete items shall be from approved sources. Concrete shall be produced from a concrete batch plant which has a current plant calibration. The Project Engineer shall furnish plant inspection as deemed necessary for control. The producer shall furnish with each load of concrete a delivery ticket containing the following information:
 - a. Project Number
 - b. Class Concrete
 - c. Weight of Cement
 - d. Free Water in Aggregate (gallons)
 - e. Weight of Fine Aggregate
 - f. Weight of Coarse Aggregate
 - g. Water in Mix (gallons)
 - h. Number of Revolutions Mixed
 - i. Time of Batching
2. The Contractor is required to submit mix designs to accomplish this work in accordance with Section 804.
3. A set of three cylinders, slump test, and air test will be performed on the first day of production for each mix design. The compressive strength test shall be the average of three cylinders.
4. An additional set of cylinders, slump test, and air test will be performed at a minimum of rate of one per 100 cubic yards of mix produced.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5866 LPA

CODE: (SP)

| DATE: 10/28/2015

SUBJECT: Payroll Requirements

Bidders are hereby advised that the Contractor and Subcontractor(s) are required to submit payroll information to the Project Engineers on a weekly basis.

On Federal-Aid Projects, LPA-880, LPA-881 and certified payroll submissions are required each week the Contractor or a Subcontractor performs work on the project. This is addressed in Section IV of Form FHWA-1273.

On State-Funded Projects, LPA-880 is required each week the Contractor or a Subcontractor performs work on the project.

| When no work is performed on either Federal-Aid or State-Funded Projects, the Contractor should only submit LPA-880 showing no work activities.

The Contractor shall make all efforts necessary to submit this information to the Project Engineer in a weekly manner. The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to submit the required information. Submission of forms and payrolls shall be current through the first full week of the month for the estimate period in order for the Project Engineer to process an estimate.

Bidders are advised to review the requirements regarding payroll submissions in Section 110 of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 7001

CODE: (SP)

DATE: 1/7/2015

SUBJECT: Contract Time

PROJECT:

The completion of work to be performed by the Contractor for this project will not be a specified date but shall be when all allowable working days are assessed, or any extension thereto as provided in Subsection 907-108.06.

The Notice of Award will be issued within 60 days of the bid opening date and the effective date of the Notice to Proceed / Beginning of Contract Time Date will be within two months following the Date of the Notice of Execution of Contract Letter.

The Contractor shall request a Notice to Proceed / Beginning of Contract Time Date after receiving the Notice of Execution of Contract Letter and the date requested should be within the two month period following the Date of the Notice of Execution of Contract Letter.

Should the Contractor not request a Notice to Proceed Date within the two months allowed, the date for the Notice to Proceed / Beginning of Contract Time will be two months after the Date of the Notice of Execution of Contract Letter.

58 Working Days have been allowed for the completion of work on this project.

A Preconstruction Conference as required by Subsection 907-108.03.2 should be held prior to commencement of any field work by the Contractor.

General Decision Number: MS160235 04/08/2016 MS235

Superseded General Decision Number: MS20150235

State: Mississippi

Construction Type: Highway

County: Forrest County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	04/08/2016

* ELEC0903-006 12/01/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 25.30	12.5%+4.00

SUMS2010-054 08/04/2014

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 12.00	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 11.54	1.63
HIGHWAY/PARKING LOT STRIPING:		
Truck Driver (Line Striping		
Truck).....	\$ 14.55	0.00
INSTALLER - SIGN.....	\$ 12.19	0.00
INSTALLER: Guardrail.....	\$ 12.39	0.00
IRONWORKER, REINFORCING.....	\$ 16.44	0.00
LABORER: Common or General,		
Including Asphalt Raking,		
Shoveling, Spreading.....	\$ 10.34	0.00
LABORER: Flagger.....	\$ 11.42	0.00
LABORER: Grade Checker.....	\$ 14.82	0.00
LABORER: Luteman.....	\$ 12.88	0.00

LABORER: Mason Tender -		
Cement/Concrete.....	\$ 10.57	0.00
LABORER: Pipelayer.....	\$ 14.50	0.00
LABORER: Laborer-Cones/ Barricades/Barrels -		
Setter/Mover/Sweeper.....	\$ 12.17	0.00
OPERATOR: Asphalt Spreader.....	\$ 14.71	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 14.20	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 11.86	0.00
OPERATOR: Broom/Sweeper.....	\$ 10.94	0.00
OPERATOR: Bulldozer.....	\$ 13.99	0.00
OPERATOR: Concrete Saw.....	\$ 13.93	0.00
OPERATOR: Crane.....	\$ 14.80	0.00
OPERATOR: Distributor.....	\$ 11.46	0.00
OPERATOR: Grader/Blade.....	\$ 16.09	0.00
OPERATOR: Loader.....	\$ 13.99	0.00

OPERATOR: Mechanic.....	\$ 13.00	0.00
OPERATOR: Milling Machine.....	\$ 16.96	0.00
OPERATOR: Oiler.....	\$ 12.22	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 11.56	0.00
OPERATOR: Roller (All Types)....	\$ 12.17	0.00
OPERATOR: Scraper.....	\$ 14.00	0.00
OPERATOR: Tractor.....	\$ 12.00	0.00
SURVEYOR (Staking, Marking and Brush Clearing).....	\$ 11.56	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 14.72	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 14.18	0.00
TRUCK DRIVER: Mechanic.....	\$ 12.31	0.00
TRUCK DRIVER: Water Truck.....	\$ 17.08	0.00
TRUCK DRIVER: Dump Truck (All Types).....	\$ 11.58	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 14.36	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of

the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material,

etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

SUPPLEMENT TO FORM FHWA-1273

DATE: 01/06/2016

SUBJECT: Final Certificate and Contract Provisions for Subcontracts

All subcontracts shall be in writing and contain all pertinent provisions and requirements of the prime contract.

Each "Request for Permission to Subcontract" (Mississippi Department of Transportation Form CAD-720) shall include a copy of subcontract upon request for review by the Mississippi Department of Transportation. The federal contract provisions may be omitted from the subcontract copy submitted for review provided the Contractor certifies that the provisions will be physically incorporated into the agreement furnished to the Subcontractor.

In lieu of submitting a copy of the subcontract for review, the Contractor may certify that the subcontract agreement is in writing and that it contains all the requirements and pertinent provisions of the prime contract.

Each Subcontractor will be required to provide a copy of the subcontract agreement for contract compliance reviews, along with physical evidence (copy of FHWA-1273) that requirements and pertinent provisions have been provided for review and adherence.

The Contractor is hereby advised of the requirements set forth in the following Attachment (Title 46 - Shipping) as it pertains to the implementation of Cargo Preference Act (CPA) requirements in the Federal-aid Highway Program.

By signing this contract, the Contractor agrees to conform to the requirements of the CPA.

Attachment

Title 46- Shipping

Volume: 8

Date: 2014-10-01

Original Date: 2014-10-01

Title: Section 381.7 - Federal Grant, Guaranty, Loan and Advance at Funds Agreements.

Context: Title 46- Shipping. CHAPTER II- MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTATION. SUBCHAPTER J - MISCELLANEOUS. PART 381 - CARGO PREFERENCE-U.S.- FLAG VESSELS.

§ 381.7 Federal Grant, Guaranty, Loan and Advance of Funds Agreements.

In order to insure a fair and reasonable participation by privately owned United States-flag commercial vessels in transporting cargoes which are subject to the Cargo Preference Act of 1954 and which are generated by U.S. Government Grant, Guaranty, Loan and/or Advance of Funds Programs, the head of each affected department or agency shall require appropriate clauses to be inserted in those Grant, Guaranty, Loan and/or Advance of Funds Agreements and all third party contracts executed between the borrower/grantee and other parties, where the possibility exists for ocean transportation of items procured, contracted for or otherwise obtained by or on behalf of the grantee, borrower, or any of their contractors or subcontractors. The clauses required by this part shall provide that at least 50 percent of the freight revenue and tonnage of cargo generated by the U.S. Government Grant, Guaranty, Loan or Advance of Funds be transported on privately owned United States-flag commercial vessels. These clauses shall also require that all parties provide to the Maritime Administration the necessary shipment information as set forth in § 381.3. A copy of the appropriate clauses required by this part shall be submitted by each affected agency or department to the Secretary, Maritime Administration, for approval no later than 30 days after the effective date of this part. The following are suggested acceptable clauses with respect to the use of United States-flag vessels to be incorporated in the Grant, Guaranty, Loan and/or Advance of Funds Agreements as well as contracts and subcontracts resulting therefrom:

(a) *Agreement Clauses.* "Use of United States-flag vessels:

"(1) Pursuant to Pub. L 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

"(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees --

"(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

"(2) To furnish within 20 days following the date of loading for shipments originating within the United

States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

"(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract."

(Reorganization Plans No.21 of 1950(64 Stat. 1273) and No. 7 of 1961 (75 Stat. 840) as amended by Pub. L 91.469 (84 Stat 1036) and Department of Commerce Organization Order 10-8 (38 FR 19707, July 23, 1973)) (42 FR 57126, Nov. 1, 1977]

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goal for female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work, is 6.9%.

Until further notice	Goals for minority participation for each trade (percent)
SHSA Cities:	
Pascagoula - Moss Point -----	16.9
Biloxi - Gulfport -----	19.2
Jackson -----	30.3
SMSA Counties:	
Desoto -----	32.3
Hancock, Harrison, Stone-----	19.2
Hinds, Rankin -----	30.3
Jackson -----	16.9
Non-SMSA Counties:	
George, Greene-----	26.4
Alcorn, Benton, Bolivar, Calhoun, Carroll, Chickasaw, Clay, Coahoma, Grenada, Itawamba, Lafayette, Lee, Leflore, Marshall, Monroe, Montgomery, Panola, Pontotoc, Prentiss, Quitman, Sunflower, Tallahatchie, Tate, Tippah, Tishomingo, Tunica, Union, Washington, Webster, Yalobusha -----	
	26.5
Attala, Choctaw, Claiborne, Clarke, Copiah, Covington, Franklin, Holmes, Humphreys, Issaquena, Jasper, Jefferson, Jefferson Davis, Jones Kemper, Lauderdale, Lawrence, Leake, Lincoln, Lowndes, Madison, Neshoba, Newton, Noxubee, Oktibbeha, Scott, Sharkey, Simpson, Smith, Warren, Wayne, Winston, Yazoo-----	
	32.0
Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall-----	
	27.7
Adams, Amite, Wilkinson -----	30.4

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4.2(d). Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is to the county and city (if any), stated in the advertisement.

5. The notification required in Paragraph 3 shall be addressed to the following:

Contract Compliance Officer
Mississippi Department of Transportation
P.O. Box 1850
Jackson, Mississippi 39215-1850

(06/28/2012)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-101-4

CODE: (IS)

DATE: 11/05/2008

SUBJECT: Definitions

Section 101, Definitions and Terms, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-101.02--Definitions. Replace the following definitions in Subsection 101.02 on pages 3 through 13.

Contract - The written agreement between the Mississippi Transportation Commission and the Contractor setting forth the obligations of the parties thereunder, including but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract includes the invitation for bids, proposal, contract form and contract bonds, specifications, supplemental specifications, interim specifications, general and detailed plans, special provisions, notices to bidders, notice to proceed, and also any agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

Contract Bonds - The approved form of security, executed by the Contractor and the Contractor's Surety(ies), guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the project. This term includes Performance and Payment Bond(s).

Surety - A corporate body, qualified under the laws of Mississippi, which is bound with and for the successful bidder by "contract bond(s)" to guarantee acceptable performance of the contract and payment of all legal taxes and debts pertaining to the construction of the project, including payment of State Sales Tax as prescribed by law, and any overpayment made to the Contractor.

Add the following to the list of definitions in Subsection 101.02 on pages 3 through 13.

Performance Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing satisfactory completion of the contract and all supplemental agreements pertaining thereto.

Payment Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing the payment of all legal debts pertaining to the construction of the project including, but not limited to, the labor and materials of subcontractors and suppliers to the prime contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-4 LPA

CODE: (SP)

DATE: 04/29/2014

SUBJECT: Bidding Requirements and Conditions

907-102.06--Preparation of Proposal. Delete the fifth, sixth, seventh, eighth, and ninth paragraphs of Subsection 102.06 on page 18.

907-102.08--Proposal Guaranty. Delete the two paragraphs in Subsection 102.08 on page 20 and substitute the following:

No proposal will be considered unless accompanied by certified check, cashier's check or bid bond, made payable to the LPA listed in the contract, in an amount of not less than five percent (5%) of the total amount of the proposal offered. The guaranty shall be evidence of good faith that, if awarded the contract, the bidder will execute the contract and give performance and payment contract bond(s) as stipulated in Subsection 907-103.05.1, 907-103.05.2, and as required by law.

If a bid bond is offered as guaranty, the bond must be on a form approved by the Chief LPA Official, made by a Surety acceptable to the Chief LPA Official and signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent and the Bidder. Such bid bond shall also conform to the requirements and conditions stipulated in Subsection 907-103.05.2 as applicable.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-103-11

CODE: (SP)

| DATE: 07/22/2015

SUBJECT: Award and Execution of Contract

Section 103, Award and Execution of Contract, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-103.04--Return of Proposal Guaranty. Delete the second paragraph of Subsection 103.04 on page 23 and substitute the following:

Certified checks or cashier's checks submitted as proposal guaranties, except those of the two lowest bidders, will be returned within 10 days of contract award. The retained proposal guaranty of the unsuccessful of the two lowest bidders will be returned within ten days following the execution of a contract with the successful low bidder. The retained proposal guaranty of the successful bidder will be returned after satisfactory performance and payment bonds have been furnished and the contract has been executed.

In the event all bids are rejected by the Commission, certified checks or cashier's checks submitted as proposal guaranty by all bidders will be returned within 10 days of rejection.

Delete Subsection 103.05 on page 23 and substitute the following:

907-103.05--Contract Bonds.

907-103.05.1--Requirement of Contract Bonds. Prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director a performance and payment bond(s), in a sum equal to the full amount of the contract as a guaranty for complete and full performance of the contract and the protection of the claimants and the Department for materials and equipment and full payment of wages in accordance with Section 65-1-85 Miss. Code Ann. (1972 as amended). In the event of award of a joint bid, each individual, partnership, firm or corporation shall assume jointly the full obligations under the contract and the contract bond(s).

907-103.05.2--Form of Bonds. The form of bond(s) shall be that provided by or acceptable to the Department. These bonds shall be executed by a Mississippi agent or qualified nonresident agent and shall be accompanied by a certification as to authorization of the attorney-in-fact to commit the Surety company. A power of attorney exhibiting the Surety's original seal supporting the Mississippi agent or the qualified nonresident agent's signature shall be furnished with each bond. The Surety company shall be currently authorized and licensed in good standing to conduct business in the State of Mississippi with a minimum rating by A.M. Best of (A-) in the latest printing "Best's Key Rating Guide" to write individual bonds up to ten percent of the policy holders' surplus or listed on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as

published by the United States Department of the Treasury, Financial Management Service, Circular 570 (latest revision as published and supplemented on the Financial Management Service Web site and in the Federal Register) within the underwriting limits listed for that Surety. The Mississippi agent or qualified nonresident agent shall be in good standing and currently licensed by the Insurance Commissioner of the State of Mississippi to represent the Surety company(ies) executing the bonds.

Surety bonds shall continue to be acceptable to the Commission throughout the life of the Contract and shall not be canceled by the Surety without the consent of the Department. In the event the Surety fails or becomes financially insolvent, the Contractor shall file a new Bond in the amount designated by the Executive Director within thirty (30) days of such failure, insolvency, or bankruptcy. Subsequent to award of Contract, the Commission or the Department may require additional security for any supplemental agreements executed under the contract or replacement security in the event of the surety(ies) loss of the ratings required above. Suits concerning bonds shall be filed in the State of Mississippi and adjudicated under its laws without reference to conflict of laws principles.

907-103.08--Failure to Execute Contract. In the first sentence of Subsection 103.08 on page 24, change “bond” to “performance and payment bonds”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-104-5

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Scope of Work

Section 104, Scope of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-104.05--Removal and Disposal of All Materials From the Project. Delete the second sentence of the first full paragraph of Subsection 104.05 on page 30 and substitute the following:

The Contractor shall also furnish the Engineer a certified letter stating that the area of disposal is not in a wetland or in Waters of the U.S.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-105-8

CODE: (SP)

DATE: 11/20/2014

SUBJECT: Control of Work

Section 105, Control of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is modified as follows.

907-105.04--Coordination of Plans, Specifications, Interim Specifications, Special Provisions and Notice to Bidders. Delete the second full paragraph of Subsection 105.04 on page 35, and substitute the following.

In case of a conflict between plan quantities, advertisement quantities, and/or bid sheet quantities, the bid sheet quantities shall prevail.

907-105.05--Cooperation by Contractor. Delete Subsection 105.05 on page 35 and substitute the following.

907-105.05--Cooperation by Contractor. The Contractor shall give the work the attention necessary to expedite its progress, and shall cooperate with the Engineer, inspectors and other Contractors in every possible way.

907-105.05.1--Project Superintendent. The Contractor shall have a competent and experienced full time resident superintendent who is capable of reading and understanding the plans and specifications for the particular work being performed. The superintendent shall be on the project site at any time work is being performed by the Prime Contractor or any Subcontractors. The superintendent shall advise the Project Engineer of an intended absence from the work and designate a person to be in charge of the work during such absence. The superintendent shall receive instructions from the Engineer or authorized representative. Upon issuance of the Notice to Award, the Contractor or duly appointed agent authorized to bind the Contractor shall file with the Executive Director the name and address of the superintendent who will supervise the work with copies to the Construction Engineer, Contract Administration Engineer, District Engineer and Project Engineer. The Executive Director shall be immediately notified in writing with copies to those stated when a change is made in the Contractor's superintendent or superintendent's address. The superintendent shall have full authority to execute orders or directives of the Engineer without delay and to promptly supply materials, equipment, labor and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet.

907-105.05.2--Certified Erosion Control Person. On projects that require an erosion control plan, the Contractor shall also designate a responsible person whose primary duty shall be to monitor and maintain the effectiveness of the erosion control plan, including NPDES permit

requirements. This responsible person must be a Certified Erosion Control Person certified by an organization approved by the Department. Prior to or at the pre-construction conference, the Contractor shall designate in writing the Certified Erosion Control Person to the Project Engineer. The designated Certified Erosion Control Person shall be assigned to only one (1) project. When special conditions exist, such as two (2) adjoining projects or two (2) projects in close proximity, the Contractor may request in writing that the State Construction Engineer approve the use of one (1) Certified Erosion Control Person for both projects. The Contractor may request in writing that the Engineer authorize a substitute Certified Erosion Control Person to act in the absence of the Certified Erosion Control Person. The substitute Certified Erosion Control Person must also be certified by an organization approved by the Department. A copy of the Certified Erosion Control Person's certification must be included in the Contractor's Protection Plan as outlined in Subsection 907-107.22.1. This in no way modifies the requirements regarding the assignment and availability of the superintendent.

907-105.14--Maintenance During Construction. Before the first sentence Subsection 105.14 on page 39, add the following.

The Contractor will be responsible for the maintenance of existing roadways within the limits of this project starting on the date of the Notice To Proceed / Beginning of Contract Time. Anytime work is performed in a travel lane, the Contractor shall install portable lane closure signs meeting the requirement of the MDOT Standard Drawing or MUTCD.

907-105.16--Acceptance. Delete Subsection 105.16 on pages 40 and 41, and substitute the following.

907-105.16--Acceptance.

907-105.16.1--Partial Acceptance of a Unit. When the Contractor has completed a unit of the work such as an interchange, a structure, a portion of the road or pavement or one project of a multi-project contract, the Contractor may request the Engineer to make a final inspection of that unit; or the Executive Director may order a final inspection of the unit if it is in the public's interest. If the Engineer finds upon inspection that the unit has been completed in compliance with the contract and it is a complete facility which can be made available to the public or made available for the prosecution of work under another contract, the Executive Director may conditionally accept the unit and conditionally relieve the Contractor of certain contractual responsibilities as defined in the release.

In the event items of work covered by such release are found to be defective or deficient as evidenced by unsatisfactory test reports of materials incorporated in the work or other engineering determination, the release shall terminate upon written notification to the Contractor. The Contractor shall make all corrections, restorations, constructions or reconstructions deemed necessary and shall resume all contractual responsibilities until all corrective measures have been made in accordance with the terms of the contract.

Partial acceptance does not constitute final acceptance of the work, or any part thereof, nor in any way void or alter any of the terms of the contract.

Relief from "certain contractual responsibilities" as indicated herein may, or may not, include:

- (a) Further maintenance of the defined limits of the partially accepted work.
- (b) Further public liability for the defined limits of the partially accepted work.
- (c) Further liability for liquidated damages as applicable to the value of the partially accepted work when the quantities for the partially accepted work are separate quantities listed on the Summary of Quantities sheet of the plans, and the separate quantities and the total amounts thereof are listed on the Engineer's Estimate. Otherwise, no reduction in liquidated damages will be made because of such partial acceptance.

Unless specifically provided in the contract, the liability for liquidated damages shall not be reduced to less than that applicable under the contract for an amount of such work equal to at least fifty percent (50%) of the total amount of work under the contract.

907-105.16.2--Partial Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection.

If the inspection discloses any work as being unsatisfactory or incomplete, the Engineer will discuss in detail with the Contractor all discrepancies in the work. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed.

However, if during the final inspection the Engineer determines that all work has been satisfactorily completed save that of growth and coverage of plant establishment on all or part of the work, the Engineer may recommend partial release of all work except items related to growth and coverage. Upon such recommendation, the Contractor will be given a partial release of maintenance and shall be released from further contractual liabilities for the completed work. The Contractor will retain responsibility for plant establishment and all maintenance and repairs appurtenant thereto until satisfactory growth and coverage is achieved.

907-105.16.3--Final Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection. If all work provided by the contract has been completed to the Engineer's satisfaction, the inspection will constitute the final inspection, and the Engineer will conditionally release the Contractor of maintenance.

As provided in the contract, in the event items of work are found to be deficient or defective as evidenced by unsatisfactory test reports of material incorporated into the work, the Contractor shall assume full responsibility for corrective measures, and shall reassume maintenance and public liability until such corrective measures are completed to the satisfaction of the Engineer.

907-105.16.4.--Final Acceptance of a Project. Upon evidence that the Contractor has fulfilled all obligations under the contract, the Executive Director will make final acceptance and notify the Contractor in writing. Final acceptance of the project will not be given until all obligations imposed under the contract, including but not limited to the final reporting of payrolls, final reporting of DBE payments, acceptable certifications and test reports of materials used, etc., have been fulfilled.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-107-13

DATE: 11/17/2015

SUBJECT: Permits, Licenses and Taxes

After the second paragraph of Subsection 907-107.02 on page 1, add the following.

Prior to commencing work on any Project, the Contractor shall obtain a Material Purchase Certificate number (MPC#) from the Mississippi Department of Revenue, pursuant to Miss. Code Ann. § 27-65-21, and Miss. Admin. Code 35.IV.10.01. Upon receipt of the MPC#, the Contractor must immediately provide the MPC# to the Contract Administration Division of the Department. Failure to obtain and submit a MPC# prior to commencing work shall result in the withholding of payment to the Contractor until such time that a MPC# is obtained and submitted to the Department.

Delete the last sentence of the last paragraph of Subsection 907-107.02 on page 1, and substitute the following.

The Department will notify the Mississippi Department of Revenue of the names and addresses of any Contractors or Subcontractors.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-107-13

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Legal Relations and Responsibility to Public

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-107.02--Permits, Licenses and Taxes. Delete in toto Subsection 107.02 on page 49 and substitute the following.

The Contractor or any Subcontractor shall have the duty to determine any and all permits and licenses required and to procure all permits and licenses, pay all charges, fees and taxes and issue all notices necessary and incidental to the due and lawful prosecution of the work. At any time during the life of this contract, the Department may audit the Contractor's or Subcontractor's compliance with the requirements of this section.

The Contractor or any Subcontractor is advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq. and the Mississippi Use Tax Law, Section 27-67-1, et seq., and their requirements and penalties, apply to any contract or subcontract for construction, reconstruction, maintenance or repairs, for contracts or subcontracts entered into with the State of Mississippi, any political subdivision of the State of Mississippi, or any Department, Agency, Institute of the State of Mississippi or any political subdivision thereof.

The Contractor or any Subcontractor will be subject to one or more audits by the Department during the life of this contract to make certain that all applicable fuel taxes, as outlined in Section 27-55-501, et seq., and any sales and/or use taxes, as outlined in Section 27-67-1, et seq. are being paid in compliance with the law. The Department will notify the Mississippi State Tax Commission of the names and addresses of any Contractors or Subcontractors.

907-107.14--Damage Claims and Insurance.

| **907-107.14.2--Liability Insurance.** Delete Subsection 107.14.2 beginning on page 60 and substitute the following.

907-107.14.2.1--General. The Contractor shall carry Contractor's liability, including subcontractors and contractual, with limits not less than: \$500,000 each occurrence; \$1,000,000 aggregate; automobile liability - \$500,000 combined single limit - each accident; Workers' Compensation and Employers' Liability - Statutory & \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. Each policy shall be signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent of the Insurance Company.

The Contractor shall have certificates furnished to the Department from the insurance companies providing the required coverage. The certificates shall be on the form furnished by the Department and will show the types and limits of coverage.

907-107.14.2.2--Railroad Protective. The following provisions are applicable to all work performed under a contract on, over or under the rights-of-way of each railroad shown on the plans.

The Contractor shall assume all liability for any and all damages to work, employees, servants, equipment and materials caused by railroad traffic.

Prior to starting any work on railroad property, the Contractor shall furnish satisfactory evidence to the Department that insurance of the forms and amounts set out herein in paragraphs (a) and (b) has been obtained. Also, the Contractor shall furnish similar evidence to the Railroad Company that insurance has been obtained in accordance with the Standard Provisions for General Liability Policies and the Railroad Protective Liability Form as published in the Code of Federal Regulations, 23 CFR 646, Subpart A. Evidence to the Railroad Company shall be in the form of a Certificate of Insurance for coverages required in paragraph (b), and the original policy of the Railroad Protective Liability Insurance for coverage required in paragraph (a).

All insurance herein specified shall be carried until the contract is satisfactorily complete as evidenced by a release of maintenance from the Department.

The Railroad Company shall be given at least 30 days notice prior to cancellation of the Railroad Protective Liability Insurance policy.

For work within the limits set out in Subsection 107.18 and this subsection, the Contractor shall provide insurance for bodily injury liability, property damage liability and physical damage to property with coverages and limits no less than shown in paragraphs (a) and (b). Bodily injury shall mean bodily injury, sickness, or disease, including death at anytime resulting therefrom. Property damage shall mean damages because of physical injury to or destruction of property, including loss of use of any property due to such injury or destruction. Physical damage shall mean direct and accidental loss of or damage to rolling stock and their contents, mechanical construction equipment or motive power equipment.

(a) **Railroad Protective Liability Insurance** shall be purchased on behalf of the Railroad Company with limits of \$2,000,000 each occurrence; \$6,000,000 aggregate applying separately to each annual period for lines without passenger trains. If the line carries passenger train(s), railroad protective liability insurance shall be purchased on behalf of the Railroad Company with limits of \$5,000,000 each occurrence; \$10,000,000 aggregate applying separately to each annual period.

Coverage shall be limited to damage suffered by the railroad on account of occurrences arising out of the work of the Contractor on or about the railroad right-of-way, independent of the railroad's general supervision or control, except as noted in paragraph 4 below.

Coverage shall include:

- (1) death of or bodily injury to passengers of the railroad and employees of the railroad not covered by State workmen's compensation laws,
- (2) personal property owned by or in the care, custody or control of the railroads,
- (3) the Contractor, or any of the Contractor's agents or employees who suffer bodily injury or death as a result of acts of the railroad or its agents, regardless of the negligence of the railroads, and
- (4) negligence of only the following classes of railroad employees:
 - (i) any supervisory employee of the railroad at the job site
 - (ii) any employee of the railroad while operating, attached to, or engaged on, work trains or other railroad equipment at the job site which are assigned exclusively to the Contractor, or
 - (iii) any employee of the railroad not within (i) or (ii) above who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or Governmental authority.

(b) **Contractor's Liability - Railroad**, including subcontractors, XCU and railroad contractual with limits of \$1,000,000 each occurrence; \$2,000,000 aggregate. **Automobile** with limits of \$1,000,000 combined single limit any one accident; **Workers' Compensation and Employer's Liability** - statutory and \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. **Excess/Umbrella Liability** \$5,000,000 each occurrence; \$5,000,000 aggregate. All coverage to be issued in the name of the Contractor shall be so written as to furnish protection to the Contractor respecting the Contractor's operations in performing work covered by the contract. Coverage shall include protection from damages arising out of bodily injury or death and damage or destruction of property which may be suffered by persons other than the Contractor's own employees.

In addition, the Contractor shall provide for and on behalf of each subcontractor by means of a separate and individual liability and property damage policy to cover like liability imposed upon the subcontractor as a result of the subcontractor's operations in the same amounts as contained above; or, in the alternative each subcontractor shall provide same.

907-107.15--Third Party Beneficiary Clause. In the first sentence of the first paragraph of Subsection 107.15 on page 61, change "create the public" to "create in the public".

907-107.17--Contractor's Responsibility for Work. Delete the fifth sentence of the fifth paragraph of Subsection 107.17 on page 63 and substitute the following.

The eligible permanent items shall be limited to traffic signal systems, changeable message signs, roadway signs and sign supports, lighting items, guard rail items, delineators, impact

attenuators, median barriers, bridge railing or pavement markings. The eligible temporary items shall be limited to changeable message signs, guard rail items, or median barriers.

907-107.18--Contractor's Responsibility for Utility Property and Services. After the first sentence of Subsection 107.18 on page 63, add the following:

Prior to any excavation on the project, the Contractor shall contact MS 811 and advise them to mark all known utilities in the area of the excavation.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-108-37LPA

DATE: 12/17/2015

SUBJECT: Prosecution and Progress

Delete the first paragraph of Subsection 907-108.03.1 on pages 1 and 2, and substitute the following.

907-108.03.1--Progress Schedule. On working day projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract.

On completion date projects **which include A + B projects**, the Contractor shall furnish a progress schedule and be prepared to discuss both its proposed methodologies for fulfilling the scheduling requirements and its sequence of operations.

The Engineer will review Contractor prepared progress schedules and approve schedules as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer prior to commencing work. The progress schedule shall be a computer generated bar-chart type schedule meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-108-37LPA

CODE: (SP)

DATE: 1/7/2015

SUBJECT: Prosecution and Progress

Section 108, Prosecution and Progress, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-108.01--Subletting of Contract.

907-108.01.1--General. At the end of the last paragraph of Subsection 108.01.1 on page 73, add the following.

The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to make prompt payment within 15 calendar days as required above, or failure to submit the required OCR-484-LPA Form, Certification of Payments to Subcontractors, which is also designed to comply with prompt payment requirements.

907-108.02--Notice To Proceed. Delete the second paragraph of Subsection 108.02 on page 75.

Delete the fourth paragraph of Subsection 108.02 on page 75 and substitute the following.

Upon written request from the Contractor and if circumstances permit, the Notice to Proceed may be issued at an earlier date subject to the conditions stated therein. The Contractor shall not be entitled to any monetary damages or extension of contract time for any delay claim or claim of inefficiency occurring between the early issuance Notice to Proceed date and the Notice to Proceed date stated in the contract.

907-108.03--Prosecution and Progress. Delete Subsection 108.03.1 on pages 75 & 76, and substitute the following.

907-108.03.1--Progress Schedule. On working day projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract. The Engineer will review the schedule and approve the schedule as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer and MDOT LPA Coordinator prior to commencing work. The progress schedule shall be a bar-chart type schedule submitted on 11"x17" paper meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

When preparing the progress schedule, the Contractor shall include the following:

- Show a time scale to graphically show the completion of the work within contract time.
- Define and relate activities to the contract pay items.
- Show all activities in the order the work is to be performed including submittals, submittal reviews, fabrication and delivery.
- Show all activities that are controlling factors in the completion of the work.
- Show the time needed to perform each activity and its relationship in time to other activities.

This progress schedule shall provide a bar for each major phase of construction such as, but not limited to, clearing and grubbing, grading, drainage structures, bridges, base, shoulders, paving, etc. with an estimated start working day and completion working day for each bar, all within the specified contract time.

A revised progress schedule may be required within ten days of the occurrence of any one of the following conditions:

- when a major change occurs in the work
- when a time extension is granted
- when the progress schedule becomes unrealistic

The Engineer's approval of the aforementioned Progress Schedules does not waive any contract requirements.

In the event the Contractor has not submitted an approvable progress schedule by the beginning of contract time, the progress schedule prepared by the LPA shall be the approved progress schedule and used to assess contract time.

An approved progress schedule shall be in effect until the date on which a revised schedule is approved. The approved progress schedule will be the basis for contract time assessment.

When a Critical Path Method (CPM) schedule is required in the proposal, this schedule will be used in lieu of the bar graph progress schedule in evaluating work progress. In such case, the same time frame noted in this subsection for the original submittal along with the update requirements will apply.

907-108.03.2--Preconstruction Conference. Delete the first paragraph of Subsection 108.03.2 on page 76 and substitute the following.

Prior to commencement of the work, a preconstruction conference shall be held for the purpose of discussing with the Contractor essential matters pertaining to the prosecution and satisfactory completion of the work. The Contractor will be responsible for scheduling the preconstruction conference. The Contractor will advise the Project Engineer in writing 14 days prior to the requested date that a conference is requested. The preconstruction conference will be coordinated through the MDOT LPA Coordinator to insure that the proper MDOT representatives are in

attendance. When the contract requires the Contractor to have a certified erosion control person, the Contractor's certified erosion control person shall be at the preconstruction conference. The local public agency will arrange for utility representatives and other affected parties to be present.

Delete the third paragraph of Subsection 108.03.2 on page 76.

907-108.06--Determination and Extension of Contract Time. Delete Subsections 108.06.1 and 108.06.2 on pages 79 thru 85 and substitute the following.

907-108.06.1--Based on [Working Day](#) Completion.

907-108.06.1.1--General. Contract Time will be established on the basis of [an allowable number of Working Days](#), as indicated in the contract. [A working day is defined as a day the Contractor worked or could have worked in accordance with the conditions set forth in Subsection 907-108.06.1.2, Subparagraphs \(a\) and \(b\), except during the months of December, January, and February.](#)

[During the months of December, January, and February, time will be assessed in the miscellaneous phase regardless of whether or not the Contractor actually works. The value for the time on any particular day will be determined by dividing the number of anticipated working day shown in the following table by the number of days in the particular month. This number will be expressed to three decimal places \(0.000\)](#)

The span of time allowed for the completion of the work included in the contract will be indicated in the contract documents and will be known as "Contract Time".

907-108.06.1.2--Contract Time. The following TABLE OF ANTICIPATED [WORKING DAYS](#) indicates an average/anticipated number of [working](#) days per month.

TABLE OF ANTICIPATED **WORKING** DAYS

Month	WORKING Days
January	6
February	7
March	11
April	15
May	19
June	20
July	21
August	21
September	20
October	16
November	11
December	5
Calendar Year	172

NOTE: The above Table is for informational purposes only. The actual working day total as assessed by the Project Engineer on Form CSD-765 shall govern.

Available **working** days will start being assessed at the original Notice to Proceed/Beginning of Contract Time date set in accordance with the contract, regardless of whether or not the Contractor has been issued an early Notice to Proceed.

Available **working** days will be based on soil and weather conditions and other specific conditions cited in the contract. The Engineer will determine on each applicable day the extent to which work in progress could have been productive, regardless of whether the Contractor actually worked.

An available **working** day will be assessed as follows:

(a) Any day of the week, Monday through Friday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works or could have worked for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works or could work four but less than six consecutive hours, one-half (0.5) of an available work day will be charged for that day. When the Contractor works or could work six or more consecutive hours during the day, one (1.0) available work day will be charged for that day, **and**

(b) Any Saturday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works less than four consecutive hours during the day, no time will be charged for that day. When the Contractor works four but less than six consecutive hours,

one-half (0.5) of an available work day will be charged for that day. When the Contractor works six or more consecutive hours during the day, one (1.0) available work day will be charged for that day.

Should the weather or other conditions be such that four (4) consecutive satisfactory hours are not available prior to noon (for daytime operations) or midnight (for nighttime operations), no time will be assessed for that day regardless of the above conditions. However, if the Contractor elects to work, time will be assessed in accordance with the previous paragraphs.

Time will not be charged during any required waiting period for placement of permanent pavement markings as set forth in Subsection 618.03 provided all other work is complete except growth and coverage of vegetative items as provided in Subsection 210.01.

Each month the Engineer will complete, and furnish to the Contractor, an "Assessment Report of Working Days" (CSD-765). This report shows the number of working days assessed during the estimate period and the cumulative working days assessed to date. The Contractor should review the Engineer's report as to the accuracy of the assessment and confer with the Resident or Project Engineer to rectify any differences. Each should make a record of the differences, if any, and conclusions reached. In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 15 calendar days following the ending date of the monthly report in question to file a protest Notice of Claim in accordance with the provisions of Subsection 105.17. Otherwise, the Engineer's assessment shall be final unless mathematical errors of assessment are subsequently found to exist, and any claim of the Contractor as to such matter shall be waived.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage of time elapsed will be determined by comparing the working days assessed to-date on Form CSD-765 to the total allowable working days for the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.1.3--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

An extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes, named tropical storms,

tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Working Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be on a working day basis.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

If the **contract time** of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the **working days are exhausted**, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.1.4--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges **for the remaining working days** will resume. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.06.2--Based on Specified Completion Date.

907-108.06.2.1--General. Contract Time will be established on the basis of a Specified Completion Date indicated in the Contract, or as determined by the Contractor in accordance with the contract documents. The span of time allowed for the completion of the work included in the contract will be known as "Contract Time".

For contracts in which a Specified Completion Date is indicated in the Contract, the span of Contract Time shall be the number of Calendar Days specified in the Contract.

For contracts in which a Completion Date is determined by the Contractor (A + B Contracts), the span of Contract Time shall be between the date of the Notice to Proceed and the date representing the number of Calendar Days determined by the Contractor to complete the work.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

At any given date, the ratio of the accumulated monetary value of that part of the work actually accomplished to the total contract bid amount adjusted to reflect approved increases or decreases shall determine the "percent complete" of the work.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage elapsed time shall be calculated as a direct ratio of the expired Calendar Days to the total Calendar Days provided for in the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.2.2--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

On all completion date contracts, an extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes,

named tropical storms, tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Calendar Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be based on a calendar day basis, excluding Saturdays, Sundays or legal holidays recognized by the Department in Subsection 108.04.1.

If the contract time of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the specified completion date, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.2.3--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges will resume. If the specified completion date had not been reached at the time the Contractor called for a final inspection, the calendar day difference between the specified completion date and the date the Contractor called for a final inspection will be added after the 14-day period before starting liquidation damages. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.07--Failure to Complete the Work on Time. Delete the Schedule of Deductions table in Subsection 108.07 on page 85, and substitute the following.

Schedule of Deductions for Each Day of Overrun in Contract Time

Original Contract Amount		Daily Charge Per Calendar Day
From More Than	To and Including	
\$ 0	100,000	\$ 150
100,000	500,000	360
500,000	1,000,000	540
1,000,000	5,000,000	830
5,000,000	10,000,000	1,200
10,000,000	20,000,000	1,800
20,000,000	-----	3,500

907-108.10--Termination of Contractor's Responsibility. In the last sentence of Subsection 108.10 on page 88, change “bond” to “performance and payment bond(s)”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-109-8

CODE: (SP)

| DATE: 09/10/2015

SUBJECT: Measurement and Payment

Section 109, Measurement and Payment, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-109.01--Measurement of Quantities. Delete the third full paragraph of Subsection 109.01 on page 90 and substitute the following.

When requested by the Contractor, material specified to be measured by the cubic yard or ton may be converted to the other measure as appropriate. Factors for this conversion will be determined by the District Materials Engineer and agreed to by the Contractor. The conversion of the materials along with the conversion factor will be incorporated into the contract by supplemental agreement. The supplemental agreement must be executed before such method of measurement is used.

After the second sentence of the fourth full paragraph of Subsection 109.01 on page 90, add the following.

Where loose vehicle measurement (LVM) is used, the capacity will be computed to the nearest one-tenth cubic yard and paid to the whole cubic yard. Measurements greater than or equal to nine-tenths of a cubic yard will be rounded to the next highest number. Measurements less than nine-tenths of a cubic yard will not be rounded to the next highest number. Example: A vehicle measurement of 9.9 cubic yards will be classified as a 10-cubic yard vehicle. A vehicle measurement of 9.8 cubic yards will be classified as a 9-cubic yard vehicle.

907-109.04--Extra and Force Account Work. Delete the first paragraph under Subsection 109.04 on page 91, and substitute the following.

When extra work results for any reason and is not handled as prescribed elsewhere herein, the Engineer and the Contractor will attempt to agree on equitable prices. When such prices are agreed upon, a Supplemental Agreement will be issued by the Engineer.

When the Supplemental Agreement process is initiated, the Contractor will be required to submit to the Engineer a detailed breakdown for Material, Labor, Equipment, Profit and Overhead. The total allowable markup (which includes Prime Contractor and Subcontractor work, if applicable) for Supplemental Agreement work shall not exceed 20%, which also includes tax and bond.

The requirement for detailed cost breakdowns may be waived when a Department's Bid Item History exists for the proposed item(s), and the Contractor's requested price, including mark-up, is within 20% of the Department's Bid History cost for that item(s). In any case, the Department reserves the right to request detailed cost breakdowns from the Contractor on any Supplemental Agreement request.

When equitable prices cannot be agreed upon mutually by the Engineer and the Contractor, the Engineer will issue a written order that work will be completed on a force account basis to be compensated in the following manner:

In the last sentence of subparagraph (b) in Subsection 109.04 on page 91, change "bond" to "bond(s)".

Delete the first and second paragraphs of subparagraph (d) in Subsection 109.04 on page 92 and substitute the following.

Equipment. For any machinery or special equipment, other than small tools, authorized by the Engineer, the Contractor will use the rates shown in the book entitled "Rental Rate Blue Book For Construction Equipment" as published by EquipmentWatch® and is current at the time the force account work is authorized, unless otherwise allowed by the Engineer. This book shall be used to determine equipment ownership and operating expense rates. These rates do not include allowances for operating labor, mobilization or demobilization costs, overhead or profit, and do not represent rental charges for those in the business of renting equipment. Operating labor and overhead cost will be allowed. Subject to advance approval of the Engineer, actual transportation cost for a distance of not more than 200 miles will be reimbursed for equipment not already on the project. The cost of transportation after completion of the force account work will be reimbursed except it cannot exceed the allowance for moving the equipment to the work.

907-109.06--Partial Payment.

907-109.06.1--General. Delete the fourth and fifth sentences of the third paragraph of Subsection 109.06.1 on page 94, and substitute the following.

In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 25 calendar days following the Contractor's receipt of the monthly estimate in question to file in writing, a protest Notice of Claim in accordance with the provisions Subsection 105.17. Otherwise, the Engineer's estimated quantities shall be considered acceptable pending any changes made during the checking of final quantities.

907-109.06.2--Advancement on Materials. Delete Subsection 109.06.2 on pages 94 & 95, and substitute the following.

907-109.06.2--Advancement on Materials. Partial payments may include advance payment for certain nonperishable or durable materials such as base aggregates, reinforcing steel, bridge piling, structural steel, prefabricated bridge components, traffic signal equipment, electrical equipment, fencing materials, and sign materials with approval of the Engineer. Advance payment may be requested for structural steel members provided fabrication has been completed and the members have been declared satisfactory for storage by a Department representative. The Contractor must make a written request to the Project Engineer for advanced payment and furnish written consent of the Surety. To qualify for advance payment, materials must be stored or stockpiled on or near the project or at other locations approved by the Engineer; or in the case of precast concrete members, treated timber, guard posts and other approved preprocessed durable and bulky materials, the materials may be stored at the commercial producer's yard provided it is located in Mississippi; or in the case of prestressed concrete members that may

require being produced at an out-of-state location, the prestress members shall be produced and may be stored at the commercial manufacturer's yard provided it is a PCI certified plant on the Department's List of Approved Prestress & Precast Plants and it is located within the continental United States; or in the case of structural steel members that may require fabrication at an out-of-state location, the fabricated members may be stored at the location of the commercial fabricator's yard provided it is located within the continental United States.

Advancements will not be allowed until the Project Engineer has received copies of material invoices and certified test reports or acceptable certificates of conformance, and in the case of materials stored at the commercial producer's/fabricator's yard, the material shall be positively identified for the specific project and a Certificate of Storage issued by the Department or a designated representative of the Department. Requests for advancements on fabricated structural steel members and prestress concrete members stored out-of-state will be denied when the Department does not have available a designated representative to issue a Certificate of Storage.

The Contractor shall make suitable arrangements to the satisfaction of the Engineer for storage and protection at approved sites or, in the case of materials stored at the commercial producer's yard located in Mississippi or, in the case of fabricated structural steel members stored at the commercial fabricator's yard or prestress concrete members stored at a commercial manufacturer's yard located within the continental United States, the Contractor shall make arrangements with the producer/fabricator for suitable storage and protection. If advanced payment is allowed and the materials are damaged, lost, destroyed or for any reason become unacceptable, the previous payments will be deducted from subsequent estimates until the materials are replaced or restored to an acceptable condition. In all cases, the Contractor shall save harmless the Commission in the event of loss or damage, regardless of cause.

An invoice or an accumulation of invoices for each eligible material must total \$10,000 or more before consideration will be given for making advanced payment. When allowed, advance payment will be based on verified actual material cost plus transportation charges to the point of storage. Sales tax, local haul and handling costs shall not be included as material cost.

Advanced payment shall not exceed 100% of the invoice price or 75% of the total contract bid price for the pay item, whichever is less.

Advanced payment for a component of a pay item shall not exceed 95% of the invoice price or 75% of the total contract bid price for the pay item of which the material is a part, whichever is less.

Advanced payment will be made only on materials that will be incorporated permanently in the project.

No advanced payment will be made on minor material items, hardware, etc.

No advanced payment will be made for materials when it is anticipated that those materials will be incorporated into the project within 60 calendar days.

Advanced payment will be paid for those materials which are not readily available, and which can be easily identified and secured for a specific project and for which lengthy stockpiling periods would not be detrimental.

Where a storage area is used for more than one project, material for each project shall be segregated from material for other projects, identified, and secured. Adequate access for auditing shall be provided. All units shall be stored in a manner so that they are clearly visible for counting and/or inspection of the individual units.

Unless specifically provided for in the contract, advance payment will not be made on materials, except for fabricated structural steel members or prestress concrete members, stored or stockpiled outside of the State of Mississippi.

Materials for which an advanced payment has been allowed must be paid for by the Contractor within 60 days of the estimate on which the advanced payment was first allowed and proof of said payment must be verified by the supplier. If proof of payment is not furnished within the allowable 60 days, the advanced payment will be deducted on subsequent current estimates until such time proof of payment is furnished.

As the materials are incorporated into the work, proportionate reductions for advance payments shall be made from monthly estimates covering the work performed. Calculation of percentage of completion, or rate of progress, shall be based on completed work and no consideration will be given to stockpiled materials.

907-109.07--Changes in Material Costs. Delete the third full paragraph of Subsection 109.07 on page 96 and substitute the following.

A link to the established base prices for bituminous products and fuels will be included in the contract documents under a Notice to Bidders entitled "Petroleum Products Base Prices."

Delete the last paragraph of Subsection 109.07 on pages 97 & 98, and substitute the following.

Adjustments herein provided shall not apply to fuels consumed or materials incorporated into the work during any monthly estimate period falling wholly after the expiration of contract time as defined in Subsection 101.02 of the applicable Mississippi Standard Specifications for Road and Bridge Construction, and as determined by checked final quantities.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-110-2

CODE: (SP)

| DATE: 04/02/2010

SUBJECT: Wage Rates

Section 110, Required Contract Provisions, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-110.02--Application. Delete Subsection 110.02.2 on page 100 and substitute the following.

907-110.02.2--Wage Rates. All persons employed or working upon the site of the work will be paid at wage rates not less than those contained in the wage determination decision of the Secretary of Labor in effect 10 days prior to taking bids.

| Bidders are advised that regardless of the wage rates listed in the Supplement to FHWA 1273 in the contract, minimum federal wage rates must be paid.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-213-2

CODE: (IS)

| DATE: 01/25/2008

SUBJECT: Agricultural Limestone

Section 907-213, Fertilizing, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-213.05--Basis of Payment. Delete the first sentence of the first paragraph of Subsection 213.05 on page 136 and add the following as the first paragraph of this subsection.

| Hard rock agricultural limestone will be paid for at the contract unit price per ton. Hard rock agricultural limestone with a relative neutralizing value (RNV), determined in accordance with Subsection 907-715-02.2.1.3, of between 60.0% and 62.9% will be paid for at half (½) the contract unit price per ton. No payment will be made for hard rock agricultural limestone with an RNV less than 60.0%.

Delete the first pay item listed on page 137 and substitute the following:

907-213-A: Agricultural Limestone

- per ton

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-216-1

CODE: (IS)

DATE: 05/22/2013

SUBJECT: Solid Sodding

Section 216, Solid Sodding, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-216.04--Method of Measurement. Delete the third and fourth paragraphs of Subsection 216.04 on page 144.

907-216.05--Basis of Payment. Delete the first paragraph of Subsection 216.05 on pages 144 and 145, and substitute the following.

Solid sodding will be paid for at the contract unit price per square yard, which price shall be full compensation for all labor, equipment, materials, tools, ground preparation, fertilization, and all incidentals necessary to complete the work.

Add the "907" prefix to the pay items listed on page 145.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-237-4

CODE: (SP)

| DATE: 03/13/2012

SUBJECT: Wattles

Section 907-237, Wattles, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-237 - WATTLES

907-237.01--Description. This work consists of furnishing, constructing and maintaining wattles for the retention of soil around inlets, swale areas, small ditches, sediment basins and other areas as necessary. Also, the work includes removing and disposing of the wattles and silt accumulations.

Measurement and payment for wattles will be made only when a pay item is included in the bid schedule of the proposal. The quantity is estimated for bidding purposes only and will be dependent upon actual conditions which occur during construction of the project.

| **907-237.02--Materials.** Wattles used around inlets shall have a diameter of twelve inches (12") and a length adequate to meet field conditions. Wattles used at other locations shall have a diameter of twenty inches (20") and a length adequate to meet field conditions. The minimum diameter for the above wattle sizes shall be one inch (1") less than the specified diameter.

The stakes used in securing the wattles in place shall be placed approximately three feet (3') apart throughout the length of the wattle. Stakes shall be wooden and of adequate size to stabilize the wattles to the satisfaction of the Engineer.

In addition to the requirements of this specifications, wattles shall be listed on the Department's "Approved Sources of Materials".

907-237.03--Construction Requirements.

907-237.03.1--General. The wattles shall be constructed at the locations and according to the requirements shown on the erosion control plan.

907-237.03.2--Maintenance and Removal. The Contractor shall maintain the wattles and remove and dispose of silt accumulations.

When the wattles are no longer needed, they shall be removed and the Contractor shall dispose of silt accumulations and treat the disturbed areas in accordance with the contract requirements.

907-237.04--Method of Measurement. Wattles of the size specified will be measured per linear foot.

907-237.05--Basis of Payment. Wattles, measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for installation, maintaining and removal of the wattles, the removal and disposal of silt accumulations and any required restoration of the disturbed areas.

Payment will be made under:

907-237-A: Wattles, Size

- per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-246-3

CODE: (SP)

DATE: 11/08/2010

SUBJECT: Sandbags and Rockbags

Section 907-246, Sandbags and Rockbags, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-246 -- SANDBAGS AND ROCKBAGS

907-246.01--Description. This item of work shall consist of the furnishing, installing, and maintaining sandbags and rockbags for the purpose of temporary erosion control by intercepting and slowing the flow of sediment-laden runoff water, or for use as a temporary dam.

907-246.02--Materials. The filler material for sandbags shall consist of a fine aggregate meeting the requirements of Subsection 703.02. The filler material for rockbags shall consist of a size 57 aggregate meeting the requirements of Subsection 703.03.

The bag material shall be woven polypropylene, polyethylene or polyamide fabric with a minimum unit weight of four (4) ounces per square yard. The bags shall be a minimum of 21 inches in length, 12 inches in width, and four (4) in thickness when filled.

907-246.03--Construction Requirements. Sandbags and rockbags shall be used to construct a berm/dam which will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Sand or rock shall be placed in the bag so that at least the top six (6) inches of the bag is unfilled to allow for proper tying of the open end. Any subsequent rows of bags shall be offset one-half the length of the preceding row to provide a layered brick-type arrangement.

The sandbag and rockbag berm/dam installation shall be maintained in good condition by the Contractor. All necessary work and materials to maintain the integrity of the installation shall be provided until earthwork construction is complete and permanent erosion-control features are in place. The maintenance of the bags will not be paid for separately and will be included in the cost for sandbags or rockbags.

907-246.04--Method of Measurement. Sandbags and rockbags will be measured per linear foot or each.

Sandbags and rockbags measured by the linear foot shall be in accordance with the details in the erosion control drawing. The length of the sandbag or rockbag berm/dam will be measured end-to-end along the cross-section of the ditch in accordance with the erosion control drawing.

907-246.05--Basic of Payment. Sandbags and rockbags, measured as prescribed above, will be

paid for per linear foot or each, which prices shall be full compensation for furnishing bags, fine aggregate, size 57 aggregate, placement of bags, maintenance of the installation, removal and disposal of the sediment deposits and removal after construction has been completed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

907-246-A: Sandbags - per linear foot or each

907-246-B: Rockbags - per linear foot or each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-601-1

CODE: (IS)

DATE: 08/29/2007

SUBJECT: Structural Concrete

Division 600, Incidental Construction, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the heading **DIVISION 600 - INCIDENTAL CONSTRUCTION**, add the following:

Unless otherwise specified, all testing of Portland cement concrete in Division 600 shall be in accordance with the requirements of Subsection 907-601.02.1.

907-601.02--Materials.

907-601.02.1--General. Delete the second and third sentence of the first paragraph of Subsection 601.02.1 on page 348, and substitute the following:

Sampling and testing will be in accordance with TMD-20-04-00-000 or TMD-20-05-00-000, as applicable.

907-601.03.6.3--Removal of Falsework, Forms, and Housing. Delete the first paragraph, the table and second paragraph of Subsection 601.03.6.3 on pages 349 and 350, and substitute the following:

The removal of falsework, forms, and the discontinuance of heating, shall be in accordance with the provisions and requirements of Subsection 907-804.03.15, except that the concrete shall conform to the following compressive strength requirements:

Wingwall and Wall Forms not Under Stress	1000 psi
Wall Forms under Stress	2200 psi
Backfill and Cover clear	2400 psi

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Subsection 907-804.03.15. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of Subsection 907-804.03.15. Technicians using the maturity meter or calculating strength/maturity graphs shall meet the requirements of Subsection 907-804.03.15.

907-601.05--Basis of Payment. Add the “907” prefix to the pay items listed on page 352.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-603-8

CODE: (SP)

DATE: 05/12/2008

SUBJECT: Culverts and Storm Drains

Section 603, Culverts and Storm Drains, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-603.03--Construction Requirements.

907-603.03.2--Bedding. After the first paragraph of the Subsection 603.03.2 on page 356, add the following:

Non-rigid pipe used in cross drains and storm drains shall have a Class B bedding. Non-rigid pipe used in side drains shall have a Class C bedding. No separate measurement will be made for pipe bedding. Costs associated with pipe bedding shall be included in the cost of the pipe.

907-603.03.4--Joining Conduit.

907-603.03.4.1--Storm Drainage. Delete the first sentence of the seventh paragraph of Subsection 603.03.4.1 on page 358, and substitute the following:

Flexible steel conduits shall be firmly joined by coupling bands.

907-603.03.7--Backfilling. After the first paragraph of the Subsection 603.03.7 on page 360, add the following:

Backfill of non-rigid corrugated polyethylene and poly (vinyl chloride) (PVC) pipe used in cross drains and storm drains shall be performed using one of the following methods:

1. Flowable fill meeting the requirements of Section 631 of the Standard Specifications. If flowable fill is used, care shall be taken to prevent the pipe from “floating”.
2. Crushed stone aggregate meeting the requirements of Subsection 703.04.3 of the Standard Specification.

No separate measurement will be made for backfilling pipe. Costs associated with backfilling pipe will be included in the cost of the pipe.

907-603.05--Basis of Payment. Add the “907” prefix to pay item nos. 603-ALT, 603-MA thru 603-MH, 603-NA thru 603-NL, 603-PE, and 603-PVC on pages 364 thru 366.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-618-13

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Temporary Construction Signs

Section 618, Maintenance of Traffic and Traffic Control Plan, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-618.03--Construction Requirements.

907-618.03.2--Barricades, Signs, and Flaggers. Delete the second paragraph of Subsection 618.03.2 on page 414, and substitute the following.

Flaggers shall be stationed at such points as may be deemed necessary.

Temporary construction signs shall be removed as their use becomes inapplicable. However, placing temporary signs and their supports flat on the ground outside the shoulder break line will be allowed.

907-618.05--Basis of Payment. Delete the first two pay items listed on page 418, and substitute the following.

907-618-A: Maintenance of Traffic - lump sum

907-618-B: Additional Construction Signs - per square foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-626-25

CODE: (IS)

DATE: 11/13/2012

SUBJECT: Thermoplastic Traffic Markings

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-626.01--Description. After the last sentence of the first paragraph of Subsection 626.01 on page 443, add the following.

All pavement marking material, excluding edge lines over rumble strips, shall be applied using the extrusion/ribbon method. Edge lines placed over rumble strips shall be applied using the atomization/spray method.

907-626.03.1.1--Equipment. After the second paragraph of Subsection 626.03.1.1 on page 444, add the following.

When edge lines are placed over rumble strips, the equipment must be able to apply the marking material using the atomization/spray method instead of extrusion/ribbon method.

907-626.03.1.2--Construction Details. Delete the second sentence of the first full paragraph of Subsection 626.03.1.2 on page 445, and substitute the following.

Unless otherwise specified in the plans or contract documents, the thickness shall be 90 mils for edge lines, center lines, lane lines, barrier lines and detail stripe including gore markings, and 120 mils for crosswalks, stop lines, and railroad, word and symbol markings.

After the last sentence of the third full paragraph of Subsection 626.03.1.2 on page 445, add the following.

When double drop thermoplastic stripe is called for in the contract, additional beads by the drop-on method shall be applied as follows.

Class A glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.
Class B glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.

The Class B glass beads shall be applied to the newly placed stripe first, followed by the application of the Class A glass beads.

907-626.05--Basis of Payment. Delete the pay items listed on page 446 and substitute the following.

907-626-A: 6" Thermoplastic* Traffic Stripe, Skip White	- per linear foot or mile
907-626-B: 6" Thermoplastic* Traffic Stripe, Continuous White	- per linear foot or mile
907-626-C: 6" Thermoplastic* Edge Stripe, Continuous White	- per linear foot or mile
907-626-D: 6" Thermoplastic* Traffic Stripe, Skip Yellow	- per linear foot or mile
907-626-E: 6" Thermoplastic* Traffic Stripe, Continuous Yellow	- per linear foot or mile
907-626-F: 6" Thermoplastic* Edge Stripe, Continuous Yellow	- per linear foot or mile
907-626-G: Thermoplastic* Detail Stripe, <u>Color</u>	- per linear foot
907-626-H: Thermoplastic* Legend, White	- per linear foot or square foot

* Indicate Double Drop if applicable

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-701-5

DATE: 09/17/2014

SUBJECT: Hydraulic Cement

In the last paragraph of Subsection 907-701.04.1.1 on page 3, change “AASHTO Designation: M 240, Table 3” to “AASHTO Designation: M 240, Table 4”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-701-5

CODE: (SP)

| DATE: 08/20/2014

SUBJECT: Hydraulic Cement

Section 701, Hydraulic Cement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete Subsection 701.01 on pages 595 & 596, and substitute the following:

907-701.01--General. The following requirements shall be applicable to hydraulic cement:

Only hydraulic cements conforming to Section 701 shall be used. Hydraulic cements shall not be listed or designated as meeting more than one AASHTO or Department type.

Different brands of hydraulic cement, or the same brand of hydraulic cement from different mills, shall not be mixed or used alternately in any one class of construction or structure, without written permission from the Engineer; except that this requirement will not be applicable to hydraulic cement treatment of design soils, or bases.

The Contractor shall provide suitable means for storing and protecting the hydraulic cement against dampness. Hydraulic cement, which for any reason, has become partially set or which contains lumps of caked hydraulic cement will be rejected. Hydraulic cement salvaged from discarded or used bags shall not be used.

The temperature of bulk hydraulic cement shall not be greater than 165°F at the time of incorporation in the mix.

Acceptance of hydraulic cement will be based on the certification program as described in the Department's Materials Division Inspection, Testing, and Certification Manual and job control sampling and testing as established by Department SOP.

Retests of hydraulic cement may be made for soundness and expansion within 28 days of test failure and, if the hydraulic cement passes, it may be accepted. Hydraulic cement shall not be rejected due to failure to meet the fineness requirements if upon retests after drying at 212°F for one hour, it meets such requirements.

Delete Subsection 701.02 on page 596, and substitute the following:

907-701.02--Portland Cement.

907-701.02.1--General.

907-701.02.1.1--Types of Portland Cement. Portland cement (cement) shall be either Type I or Type II conforming to AASHTO Designation: M85. Type III cement conforming to AASHTO Designation: M85 or Type III (MS), as defined by the description below Table 1, may be used for the production of precast or precast-prestressed concrete members.

907-701.02.1.2--Alkali Content. All cement types in this Subsection shall meet the Equivalent alkali content requirement for low-alkali cements listed in AASHTO Designation: M85, Table 2.

907-701.02.2--Replacement by Other Cementitious Materials. The maximum replacement of cement by weight is 25% for fly ash or 50% for ground granulated blast furnace slag (GGBFS). The minimum tolerance for replacement shall be 5% below the maximum replacement content. Replacement contents below this minimum tolerance by fly ash or GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of cement by fly ash or GGBFS.

907-701.02.2.1--Portland Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater. When portland cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash, GGBFS, or silica fume shall be as follows in Table 1.

Table 1- Cementitious Materials for Soluble Sulfate Conditions

Sulfate Exposure	Water-soluble sulfate (SO ₄) in soil, % by mass	Sulfate (SO ₄) in water, ppm	Cementitious material required*
Moderate and Seawater	0.10 - 0.20	150 - 1,500	Type II **, ***, **** cement, or Type I cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume
Severe	0.20 - 2.00	1,500 - 10,000	Type I cement with a replacement by weight of 50% GGBFS, or Type II cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume

* The values listed in this table for replacement of portland cement by the cementitious materials listed are maximums and shall not be exceeded. The

minimum tolerance for replacement shall be 0.5% below the maximum replacement content. Replacement contents below this minimum tolerance by the cementitious materials listed in this table do not meet the requirements for the exposure conditions listed and shall not be allowed.

** Type III cement conforming to AASHTO Designation: M85 with a maximum 8% tricalcium aluminate (C_3A) may be used in lieu of Type II cement as allowed in Subsection 907-701.02.1; this cement is given the designation "Type III(MS)".

*** Blended cement meeting the sulfate resistance requirements of Subsection 907-701.04 may be used in lieu of Type II as allowed in Subsection 907-701.04.

**** Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.02.2.

Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed above.

907-701.02.2.2--Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater. When portland cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 907-701.02.2.1. Silica fume shall be used to bring the cementitious materials into compliance with the requirements of Table 1.

Delete Subsection 701.03 on page 596, and substitute the following:

907-701.03--Masonry Cement. Masonry cement shall conform to ASTM Designation: C 91 and shall only be used in masonry applications.

Delete Subsection 701.04 on page 596, and substitute the following:

907-701.04--Blended Hydraulic Cement.

907-701.04.1--General.

907-701.04.1.1--Types of Blended Cement. Blended hydraulic cements (blended cements) shall be of the following types and conform to AASHTO Designation: M 240:

Type IS – Portland blast-furnace slag cement

Type IP – Portland-pozzolan cement

Type IL – Portland-limestone cement

Blended cement Types IS and IP for use in portland cement concrete or soil stabilization exposed to the moderate soluble sulfate condition or exposure to seawater as defined in Table 1 shall meet the Sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3 and the "(MS)" suffix shall be added to the type designation.

907-701.04.1.2--Alkali Content. All blended cement shall be made with clinker that would result in cement meeting the requirements of Subsection 907-701.02.1.2 when used in the production of AASHTO Designation: M 85, Type I or Type II cement.

907-701.04.2--Replacement by Other Cementitious Materials. The maximum replacement of blended cement Type IL by weight is 35% for fly ash or 50% for GGBFS. Replacement contents below 20% fly ash or 45% GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of blended cement by fly ash or GGBFS. No additional cementitious materials, such as Portland cement, performance hydraulic cement, fly ash, GGBFS, metakaolin, or others, shall be added to or as a replacement for blended cement Types IS and IP.

907-701.04.3--Exposure to Soluble Sulfate Conditions or Seawater. When portland cement concrete or blended cement for soil stabilization is exposed to moderate soluble sulfate conditions or to seawater, where the moderate soluble sulfate condition is defined in Table 1, the blended cement shall meet the sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3.

When portland cement concrete or blended cement for soil stabilization is exposed to severe soluble sulfate conditions, where the severe soluble sulfate condition is defined in Table 1, blended cements shall not be used.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-708-6

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Non-Metal Drainage Structures

Section 708, Non-Metal Structures and Cattlepasses, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-708.02.1.2--Fly Ash. In the first sentence of Subsection 708.02.1.2 on page 639, change “20 percent” to “25%”.

| **907-708.02.1.4--Coarse Aggregate.** Delete the last sentence of Subsection 708.02.1.4 on page 639.

907-708.02.3.2--Marking. Delete the second sentence of Subsection 708.02.3.2 on page 640, and substitute the following.

Machine made pipe shall be marked in accordance with one of the following methods: 1) the pipe shall be inscribed on the outside of the pipe and stenciled on the inside of the pipe, or 2) the pipe shall be inscribed on the inside of the pipe, only. All other pipe may be stenciled.

907-708.17--Corrugated Plastic Pipe Culverts.

907-708.17.1--Corrugated Polyethylene Pipe Culverts. Delete the first sentence of the first paragraph of Subsection 708.17.1 on page 645 and substitute the following.

Corrugated polyethylene pipe shall conform to the requirements of AASHTO Designation: M 294, Type S and/or SP, as applicable, and shall have soil tight joints, unless otherwise specified.

Delete the last sentence of the second paragraph of Subsection 708.17.1 on page 645.

After Subsection 708.17.1 on page 645, add the following.

907-708.17.1.1--Inspection and Final Acceptance of Corrugated Polyethylene Pipe Culverts.

Approximately 50% of the installed length of corrugated polyethylene pipe shall be inspected for excess deflection no sooner than 30 days after the embankment material over the pipe is placed to the required subgrade elevation or the maximum required fill height. The inspection shall be performed using either electronic deflectometers, calibrated television or video cameras, or a “go, no-go” mandrel that has an effective diameter of 95% of the nominal inside diameter of the pipe.

Pipe found to have deflection values greater than 5% shall be removed and replaced at no cost to the State.

907-708.17.2--Corrugated Poly (Vinyl Chloride) (PVC) Pipe Culverts. Delete the first sentence of the first paragraph of Subsection 708.17.2 on page 645 and substitute the following.

Corrugated poly (vinyl chloride) (PVC) pipe shall conform to the requirements of AASHTO Designation: M 304 and shall have soil tight joints, unless otherwise specified. Non-perforated PVC pipe used in underdrains shall either be manufactured with an ultra-violet light inhibitor or be fully coated with an ultra-violet light inhibitor.

After Subsection 708.17.2 on page 645, add the following.

907-708.17.2.1--Inspection and Final Acceptance of Poly (Vinyl Chloride) (PVC) Pipe Culverts. Approximately 50% of the installed length of PVC pipe shall be inspected for excess deflection no sooner than 30 days after the embankment material over the pipe is placed to the required subgrade elevation or the maximum required fill height. The inspection shall be performed using either electronic deflectometers, calibrated television or video cameras, or a “go, no-go” mandrel that has an effective diameter of 95% of the nominal inside diameter of the pipe.

Pipe found to have deflection values greater than 5% shall be removed and replaced at no cost to the State.

907-708.18--Sewer Pipe Used for Underdrains.

907-708.18.1--General. After the second paragraph of Subsection 708.18.1 on page 645 add the following.

In lieu of the pipe listed in this subsection, pipe meeting the requirements of Subsection 708.19 may also be used for plastic underdrain pipe.

907-708.18.3--Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe. After the first sentence of Subsection 708.18.3 on page 645, add the following.

Non-perforated PVC pipe shall either be manufactured with an ultra-violet light inhibitor or be fully coated with an ultra-violet light inhibitor.

907-708.18.4--Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe. Delete the paragraph in Subsection 708.18.4 on page 645 and substitute the following.

This pipe shall conform to the following requirements. For pipe sizes less than or equal to six inches ($\leq 6''$), the pipe shall be Class PS46 meeting the requirements of AASHTO Designation: M 278. For pipe sizes greater than six inches ($> 6''$), the pipe shall meet the requirements of AASHTO Designation: M 304. Non-perforated PVC pipe shall either be manufactured with an ultra-violet light inhibitor or be fully coated with an ultra-violet light inhibitor.

Delete Subsection 708.19 on page 645 and substitute the following.

907-708.19--Corrugated Polyethylene Pipe. This pipe shall be high density polyethylene pipe or drainage tubing meet the requirements of AASHTO Designation: M 294, Type S or SP, or AASHTO Designation: M 252, Type S or Type SP, as applicable.

907-708.22.2--Exceptions to AASHTO. Delete the sixth paragraph of Subsection 708.22.2 on page 647.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-709-1

CODE: (SP)

DATE: 05/05/2008

SUBJECT: Metal Pipe

Section 709, Metal Pipe, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After Subsection 709.02 on page 649, add the following:

907-709.02.1--Aluminized Corrugated Metal Culvert Pipe and Pipe Arches. All aluminized metal pipe and arches shall be manufactured from Type 2 corrugated metal pipe and arches in accordance with the requirements of Subsection 709.02.

907-709.03--Bituminous Coated Corrugated Metal pipe and Pipe Arches.

907-709.03.1--Materials. Delete the first sentence of the first paragraph of Subsection 709.03.1 on page 649, and substitute the following:

Bituminous coated corrugated metal pipe and arches shall conform to the requirements of AASHTO Designation: M 190 and be completely coated inside and out with an asphalt cement which will meet the performance requirements hereinafter set forth.

907-709.05--Polymer Coated Corrugated Metal Pipe and Pipe Arches. Delete the first sentence of the first paragraph of Subsection 709.05 on pages 649 and 650, and substitute the following:

Polymer coated corrugated metal pipe and arches shall conform to the requirements of AASHTO Designation: M 245, except the minimum gauge thickness shall be as shown on the plans or in the contract; however, corrugated metal pipe manufactured from sheets thicker than that specified will be acceptable when approved by the Engineer. The internal diameter of corrugated metal pipe will be determined by inside measurement between the crests of the corrugations. Corrugations greater than 3" x 1" will not be allowed in arch pipe.

907-709.06--Corrugated Metal Pipe for Underdrains. Delete the sentence in Subsection 709.06 on page 650, and substitute the following:

Corrugated metal pipe shall conform to AASHTO Designation: M 36, Type III. Type I pipe which has been perforated to permit the in-flow or out-flow of water may be used in lieu of Type III pipe.

907-709.06.1--Aluminized Corrugated Metal Culvert Pipe For Underdrains. All aluminized corrugated metal pipe for underdrains shall be manufactured from Type 2 corrugated metal pipe

and arches in accordance with the requirements of AASHTO Designation: M 36, Type III. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.07--Bituminous Coated Corrugated Metal Pipe for Underdrains. Delete the sentence in Subsection 709.07 on page 650, and substitute the following:

Bituminous coated corrugated metal pipe shall conform to the requirements of AASHTO Designation: M 190, Type A with a bituminous coating applied in accordance with the requirements of Subsection 709.03. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.08--Polymer Coated Corrugated Metal Pipe for Underdrains. Delete the sentence in Subsection 709.08 on page 650, and substitute the following:

The metal pipe for underdrains shall conform to the requirements of AASHTO Designation: M 245, Type III and the polymer coating shall conform to the requirements of Subsection 709.05. Type I pipe which has been perforated to permit the in-flow or out-flow of water may be used in lieu of Type III pipe. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.09--Corrugated Aluminum Alloy Culvert Pipe and Arches. Delete the first sentence in Subsection 709.09 on page 650, and substitute the following:

Corrugated aluminum culvert pipe and arches shall conform to the requirements of AASHTO Designation: M 196, Type IA.

907-709.10--Corrugated Aluminum Alloy Pipe for Underdrains. Delete the first sentence in Subsection 709.10 on page 650, and substitute the following:

Corrugated aluminum pipe underdrains shall conform to the requirements of AASHTO Designation: M 196, Type III. Type I pipe which has been perforated to permit the in-flow or out-flow of water may be used in lieu of Type III pipe.

907-709.11--Bituminous Coated Corrugated Aluminum Alloy Culvert Pipe and Arches. Delete the sentence in Subsection 709.11 on page 650, and substitute the following:

Bituminous coated aluminum culvert pipe and arches shall conform to AASHTO Designation: M 196, Type IA, and in addition shall be coated inside and out as specified in Subsection 709.03. Manufacturer must repair any damaged coating caused from perforating the pipe.

907-709.13--Bituminous Coated Corrugated Aluminum Alloy Pipe for Underdrains. Delete the sentence in Subsection 709.13 on page 650, and substitute the following:

This pipe shall conform to AASHTO Designation: M 196, Type III, and shall be coated with bituminous material conforming to AASHTO Designation: M 190, type coating as specified. Manufacturer must repair any damaged coating caused from perforating the pipe.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-711-4

CODE: (IS)

DATE: 06/26/2009

SUBJECT: Synthetic Structural Fiber Reinforcement

Section 711, Reinforcement and Wire Rope, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After Subsection 711.03.4.3 on page 665, add the following:

907-711.04--Synthetic Structural Fiber. The synthetic structural fibers shall be approved for listing in the Department's "Approved Sources of Materials" prior to use. The synthetic structural fibers shall be added to the concrete and mixed in accordance with the manufacturer's recommended methods.

907-711.04.1--Material Properties. The fibers shall meet the requirements of ASTM Designation: C 1116, Section 4.1.3. The fibers shall be made of polypropylene, polypropylene/polyethylene blend, nylon, or polyvinyl alcohol (PVA).

907-711.04.2--Minimum Dosage Rate. The dosage rate shall be such that the average residual strength ratio ($R_{150,3.0}$) of fiber reinforced concrete beams is a minimum of 20.0 percent when the beams are tested in accordance with ASTM Designation: C 1609. The dosage rate for fibers shall be determined by the following.

The fiber manufacturer shall have the fibers tested by an acceptable, independent laboratory acceptable to the Department and regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology and approved to perform ASTM Designations: C 39, C 78, and C192.

The laboratory shall test the fibers following the requirements of ASTM Designation: C 1609 in a minimum of three (3) test specimens cast from the same batch of concrete, molded in 6 x 6 x 20-inch standard beam molds meeting the requirements of ASTM Designation: C 31. The beams shall be tested on an 18-inch span. The tests for $R_{150,3.0}$ shall be performed when the average compressive strength of concrete used to cast the beams is between 3500 and 4500 psi. The tests for compressive strength shall follow the requirements of ASTM Designation: C 39. The average compressive strength shall be determined from a minimum of two (2) compressive strength cylinders.

The value for $R_{150,3}$ shall be determined using the following equation:

$$R_{150,3.0} = \frac{f_{150,3.0}}{f_1} \times 100$$

The residual flexural strength ($f_{150,3.0}$) shall be determined using the following equation:

$$f_{150,3.0} = \frac{P_{150,3.0} \times L}{b \times d^2}$$

where:

$f_{150,3.0}$ is the residual flexural strength at the midspan deflection of $L/150$, (psi),

$P_{150,3.0}$ is the residual load capacity at the midspan deflection of $L/150$, (lbf),

L is the span, (in),

b is the width of the specimen at the fracture, (in), and

d is the depth of the specimen at the fracture, (in).

For a 6 x 6 x 20-inch beam, the $P_{150,3.0}$ shall be measured at a midspan deflection of 0.12 inch.

Additionally, $R_{150,3.0}$, $f_{150,3.0}$, and $P_{150,3.0}$ may also be referred to as R_{150}^{150} , f_{150}^{150} , and P_{150}^{150} respectively.

At the dosage rate required to achieve the minimum $R_{150,3}$, the mixture shall both be workable and the fibers shall not form clumps.

The manufacturer shall submit to the State Materials Engineer certified test reports from the independent laboratory showing the test results of each test specimen.

907-711.04.3--Job Control Requirements. The synthetic structural fibers shall be one from the Department's "Approved Sources of Materials."

At the required dosage rate, the mixture shall both be workable and the fibers shall not form clumps to the satisfaction of the Engineer. If the mixture is determined by the Engineer to not be workable or have clumps of fibers, the mixture may be rejected.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-713-6

CODE: (SP)

DATE: 03/17/2016

SUBJECT: Admixtures for Concrete

Section 713, Concrete Curing Materials and Admixtures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

After the second paragraph of Subsection 713.01.2 on page 676, add the following.

Type 1-D compound may be used on bridge rails, median barriers, and other structures requiring a spray finish. When Type 1-D compound is used, it will be the responsibility of the Contractor to assure that the compound has dissipated from the structure prior to applying the spray finish and that the spray finish adheres soundly to the structure.

Delete Subsection 713.02 on pages 676 & 677, and substitute the following.

907-713.02--Admixtures for Concrete. Air-entraining admixtures used in Portland cement concrete shall comply with AASHTO Designation: M 154. Set-retarding, accelerating, and/or water-reducing admixtures shall comply with AASHTO Designation: M 194. Water-reducing admixture shall meet the minimum requirements for Type A. Set-retarding admixtures shall meet the minimum requirements for Type D. Admixtures providing a specific performance characteristic(s) other than those of water reduction or set retardation shall meet the minimum requirements for Type S. For admixtures meeting the requirements for Type S, the manufacturer shall provide data to substantiate the specific performance characteristic(s) to the satisfaction of the State Materials Engineer.

In order to obtain approval of an admixture, the State Materials Engineer shall have been furnished certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO Standard Specification.

The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

After an admixture has been approved, the Contractor shall submit to the State Materials Engineer, with each new lot of material shipped, a certification from the manufacturer in accordance with the requirements of Subsection 700.05.1 and stating the material is of the same composition as

originally approved and has not been changed or altered in any way. The requirement in Subsection 700.05.1(b) is not required on the certification from the manufacturer.

Admixtures containing chlorides will not be permitted.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

Admixtures shall only be used in accordance with the manufacturer's recommended dosage range as set forth in the manufacturer's approval request correspondence. When an admixture is used in Portland cement concrete, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.1--Source Approval. In order to obtain approval of an admixture, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO or Department Specification for the specific type and the dosage range for the specific type of admixture.

907-713.02.2--Specific Requirements. Admixtures containing chlorides will not be permitted.

907-713.02.3--Acceptance. The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

With each new lot of material shipped the Contractor shall submit to the State Materials Engineer, a notarized certification from the manufacturer showing that the material complies with the requirements of the applicable AASHTO or Department Specification.

When an admixture is used, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.4--Waterproofing Admixture. This product is used as a waterproofing admixture for cast in place concrete bridge decks and bridge deck topping.

The Contractor shall submit manufacturer's product data and installation methods for each type of the products required to demonstrate the product complies with specifications.

The materials shall be installed in accordance with manufacturer's instructions.

The waterproofing admixture shall be one of the following, or an approved equal.

- Xypex Admix
- Everdure Caltite
- Hycrete W1000

The dosage rate for the above admixtures shall be as follows:

- Xypex Admix shall be 15 pounds per cubic yard.
- Everdure Caltite shall be a minimum of 1.5% by weight of cement.
- Hycrete W1000 shall be a minimum one (1) gallon per cubic yard.

Any retardation of set that occurs will depend upon the concrete mix design and the dosage rate of the admixture.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-714-8

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Miscellaneous Materials

Section 714, Miscellaneous Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-714.05--Fly Ash. Delete Subsections 714.05.1 & 714.05.2 on pages 680 & 681, and substitute the following.

907-714.05.1--General. The fly ash source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of fly ash shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

Different classes of fly ash or different sources of the same class shall not be mixed or used in the construction of a structure or unit of a structure without written permission from the Engineer.

The Contractor shall provide suitable means for storing and protecting the fly ash from dampness. Separate storage silos, bins, or containers shall be provided for fly ash. Fly ash which has become partially set or contains lumps of caked fly ash shall not be used.

The temperature of the bulk fly ash shall not be greater than 165°F at the time of incorporation into the work.

All classes of fly ash shall meet the supplementary option chemical requirement for available alkalis listed in AASHTO Designation: M 295, Table 2. Class F fly ash shall have a calcium oxide (CaO) content of less than 6.0%. Class C fly ash shall have a CaO content of greater than or equal to 8.0%.

The replacement of Portland cement with fly ash shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

In addition to these requirements, fly ash shall meet the following specific requirements for the intended use.

907-714.05.2--Fly Ash for Use in Concrete. When used with Portland cement in the production of concrete or grout, the fly ash shall meet the requirements of AASHTO Designation: M 295, Class C or F, with the following exception:

The loss on ignition shall not exceed 6.0 percent.

No additional cementitious materials, such as blended hydraulic cement, GGBFS, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with fly ash.

907-714.06--Ground Granulated Blast Furnace Slag (GGBFS). Delete Subsection 714.06.1 on page 681, and substitute the following.

907-714.06.1--General. The GGBFS source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of GGBFS shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

The Contractor shall provide suitable means for storing and protecting the GGBFS against dampness and contamination. Separate storage silos, bins, or containers shall be provided for GGBFS. GGBFS which has become partially set, caked or contains lumps shall not be used.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing or other additions made to the GGBFS during production.

GGBFS from different mills shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer; except that this requirement will not be applicable to cement treatment of design soils or bases.

No additional cementitious materials, such as blended hydraulic cement, fly ash, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with GGBFS in the production of concrete. The replacement of Portland cement with GGBFS shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

Delete Subsection 714.07 on page 682, and substitute the following.

907-714.07--Additional Cementitious Materials.

907-714.07.1--Metakaolin.

907-714.07.1.1--General. Metakaolin shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Metakaolin from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with metakaolin in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the metakaolin during production.

907-714.07.1.2--Source Approval. The approval of each metakaolin source shall be on a case

by case basis as determined by the State Materials Engineer. In order to obtain approval of a metakaolin source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the metakaolin meets all the requirements of AASHTO Designation: M295, including the Effectiveness in contributing to sulfate resistance, Procedure A, listed in AASHTO Designation: M295, Table 4 for Supplementary Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of metakaolin from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed metakaolin shall be incorporated at the rate of 10% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.1.3--Storage. The Contractor shall provide suitable means for storing and protecting the metakaolin against dampness and contamination. Metakaolin which has become partially set, caked, or contains lumps shall not be used.

907-714.07.1.4--Specific Requirements. Metakaolin shall meet the requirements of AASHTO Designation: M 295, Class N with the following modifications:

1. The sum of $SiO_2 + Al_2O_3 + Fe_2O_3$ shall be at least 85%. The Material Safety Data Sheet shall indicate that the amount of crystalline silica, as measured by National Institute of Occupation Safety and Health (NIOSH) 7500 method, after removal of the mica interference, is less than 1.0%.
2. The loss on ignition shall be less than 3.0%.
3. The available alkalies, as equivalent Na_2O , shall not exceed 1.0%.
4. The amount of material retained on a No. 325 mesh sieve shall not exceed 1.0%.
5. The strength activity index at seven (7) days shall be at least 85%.

907-714.07.1.5--Acceptance. With each new lot of material shipped the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the requirements AASHTO Designation: M295, Class N and the requirements of this Subsection.

The Department reserves the right to sample, for check tests, any shipment or lot of metakaolin delivered to a project.

907-714.07.2--Silica Fume.

907-714.07.2.1--General. Silica fume shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Silica fume from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, performance hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with silica fume in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the silica fume during production.

907-714.07.2.2--Source Approval. The approval of each silica fume source shall be on a case by case basis as determined by the State Materials Engineer. In order to obtain approval of a silica fume source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the silica fume meets all the requirements of AASHTO Designation: M307, Table 3, including the Sulfate resistance expansion, listed in the table for Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of silica fume from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed silica fume shall be incorporated at the rate of 8% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.2.3--Storage. The Contractor shall provide suitable means for storing and protecting the silica fume against dampness and contamination. Silica fume which has become partially set, caked, or contains lumps shall not be used.

907-714.07.2.4--Acceptance. With each new lot of material shipped, the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the Chemical and Physical Requirements of AASHTO Designation: M307.

The Department reserves the right to sample, for check tests, any shipment or lot of silica fume delivered to a project.

Delete Subsection 714.11.6 on pages 690 and 691, and substitute the following.

907-714.11.6--Rapid Setting Cementitious Patching Compounds for Concrete Repair. Rapid setting concrete patching compounds must be approved for listing in the Department's "Approved Sources of Materials" prior to use. Upon approval, a product must be recertified every four (4) years to remain on the "Approved Sources of Materials" list. Each product shall be pre-measured and packaged dry by the manufacturer. All liquid solutions included by the manufacturer as components of the packaged material shall be packaged in a watertight container. The manufacturer may include aggregates in the packaged material or recommend the addition of Contractor furnished aggregates.

The type, size and quantity of aggregates, if any, to be added at the job site shall be in accordance with the manufacturer's recommendations and shall meet the requirements of Subsection 703.02 for fine aggregate and Subsection 703.03 for coarse aggregate. Required mixing water to be added at the job site shall meet the requirements of Subsection 714.01.2.

Only those bonding agents, if any, recommended by the manufacturer of the grout or patching compounds may be used for increasing the bond to old concrete or mortar surfaces.

Patching compounds containing soluble chlorides will not be permitted when in contact with steel.

Site preparation, proportioning of materials, mixing, placing and curing shall be performed in accordance with the manufacturer's recommendation for the specific type of application, and the Contractor shall furnish a copy of these recommendations to the Engineer.

Rapid setting cementitious concrete patching compounds, including components to be added at the job site, shall conform to the following physical requirements:

Non-shrink cementitious grouts shall not be permitted for use.

Compressive strength shall equal or exceed 3000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

Bond strength shall equal or exceed 1000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

The material shall have a maximum length change of $\pm 0.15\%$ in accordance with ASTM C 928 for Type R2 concrete or mortar.

The Contractor shall furnish to the Engineer three copies of the manufacturer's certified test report(s) showing results of all required tests and certification that the material meets the specifications when mixed and placed in accordance with the manufacturer's instructions. When the mixture is to be placed in contact with steel, the certification shall further state that the packaged material contains no chlorides. Certified test report(s) and certification shall be furnished for each lot in a shipment.

The proportioning of materials must be approved by the State Materials Engineer and any subsequent change in proportioning must also be approved. A sample of each component shall be submitted to the Engineer along with the quantity or percentage of each to be blended. At least 45 days must be allowed for initial approval.

The proportioning of materials for subsequent lots may be approved by the State Materials Engineer upon receipt of certification from the manufacturer that the new lot of material is the same composition as that originally approved by the Department and that the material has not been changed or altered in any way.

907-714.11.7--Commercial Grout for Anchoring Doweled Tie Bars in Concrete. Before Subsection 714.11.7.1 on page 691, add the following.

Approved Non-"Fast Set" Epoxy anchor systems as specified below may be used for the repair of concrete pavements that do not involve permanent sustained tension applications or overhead applications.

"Fast Set Epoxy" may not be used for any Adhesive Anchor Applications. Adhesive Anchor Systems (Fast Set epoxy or otherwise) shall not be used for permanent sustained tension applications or overhead applications. "Fast Set Epoxy" refers to an epoxy produced by the Sika Corporation called Sikadur AnchorFix-3 and repackaged for sale under a variety of names/companies listed at the Federal Highway Administration web site at the following link:

<http://www.fhwa.dot.gov/Bridge/adhesives.cfm>

907-714.11.7.4--Acceptance Procedure. After the last sentence of the first paragraph of Subsection 714.11.4 on page 691, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the "Approved Sources of Materials" list.

907-714.11.8--Epoxy Joint Repair System.

907-714.11.8.1--General. After the last sentence of the first paragraph of Subsection 714.11.8.1 on page 692, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the "Approved Sources of Materials" list.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-715-4

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Roadside Development Materials

Section 715, Roadside Development Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-715.02.2.1--Agricultural Limestone. Delete the first sentence of Subsection 715-02.2.1 on page 704 and substitute the following.

Agricultural limestone shall be either a hard-rock limestone material or a marl or chalk agricultural liming material as addressed in the latest amendment to the Mississippi Agricultural Liming Material Act of 1993, published by the Mississippi Department of Agriculture and Commerce.

907-715.02.2.1.1--Screening Requirements. Delete the first sentence of Subsection 715.02.2.1.1 on page 704.

Delete Subsection 715.02.2.1.2 on page 704 and substitute the following.

907-715.02.2.1.2--Calcium Carbonate Equivalent. Marl or chalk liming material shall not have less than 70% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry weight basis.

907-715.02.2.1.3--Neutralizing Values. Hard-rock limestone material shall have a minimum Relative Neutralizing Value (RNV) of 63.0%, which is determined as follows.

$$\% \text{ RNV} = \text{CCE} \times (\% \text{ passing \#10 mesh} + \% \text{ passing \#50 mesh}) / 2$$

Where: CCE = Calcium Carbonate Equivalent

907-715.03--Seed.

907-715.03.2--Germination and Purity Requirements. Add the following to Table B on page 705.

Name (Kind)	Name (Variety)	Percent Germination	Percent Purity
GRASSES			
Rye Grass	Annual	80	98
Wheat	-	80	98

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-720-2

CODE: (IS)

| DATE: 05/01/2013

| SUBJECT: Pavement Marking Materials

Section 720, Pavement Marking Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

| **907-720.01--Glass Beads.** After the first sentence of Subsection 720.01 on page 729, add the following.

The glass beads shall contain no more than 200 ppm (mg/kg) total concentration for lead, arsenic, or antimony. The manufacture shall furnish the Engineer with a certified test report indicating that the glass beads meet the above requirement.

907-720.02--Thermoplastic Pavement Markings. Delete the first paragraph of Subsection 720.02 on page 730 and substitute the following.

The thermoplastic material shall be lead free and conform to AASHTO Designation: M 249 except the glass beads shall be moisture resistant coated.

After the first sentence of the second paragraph of Subsection 720.02 on page 730, add the following.

In addition, the certification for the thermoplastic material shall state that the material is lead free.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-804-19

DATE: 03/22/2016

SUBJECT: Concrete Bridges and Structures

Delete the second and third paragraphs of Subsection 907.804.03.16.2 on page 37, and substitute the following.

For bridge decks when the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods. Additionally, when the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-19

CODE: (SP)

DATE: 11/10/2015

SUBJECT: Concrete Bridges and Structures

Section 804, Concrete Bridges and Structures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby deleted and replaced as follows.

SECTION 907-804--CONCRETE BRIDGES AND STRUCTURES

907-804.01--Description. This work consists of constructing concrete bridges and structures in accordance with these specifications and in reasonably close conformity with the dimensions, designs, lines, and grades indicated on the plans or established.

Construction of box bridges shall be in accordance with Sections 601 and 602.

907-804.02--Materials.

907-804.02.1--General. Concrete produced and controlled from this specification shall be accepted upon proper certification of concrete production through an approved quality control program and verification by job site acceptance criteria. The Contractor shall develop and implement a quality control program which shall be used to maintain the required properties of concrete. For projects with 1000 cubic yards and more, quality control and acceptance shall be achieved through statistical evaluation of test results. For projects of more than 200 but less than 1000 cubic yards, quality control and acceptance shall be achieved by individual test results. For projects less than or equal to 200 cubic yards, refer to the requirements of TMD-20-05-00-000 "Sampling and Testing of Small Quantities of Miscellaneous Materials" for mixture design and testing requirements.

The materials for concrete bridges and structures, when sampled and tested in accordance with Subsection 700.03, shall meet the requirements of the following Subsections:

Portland Cement	701.01 and 701.02
Blended Cement	907-701.01 and 907-701.04
Admixtures	713.02
Fly Ash	714.05
Ground Granulated Blast Furnace Slag (GGBFS)	907-714.06
Silica Fume	907-714.07.2
Water	714.01.1 and 714.01.2
Fine Aggregate	703.02
Coarse Aggregate	703.03
Lightweight Aggregate	907-703.19
Curing Materials	713.01

Joint Materials	707.01, 707.02, and 707.07
Structural Steel Joints and Bearing Devices	717.01
Bearing Pads	714.10
Wire Rope or Wire Cable for Prestressed Concrete	700.01 and 711.03
Sprayed Finish for Concrete Surface	714.12
Reinforcing Steel	711.02

907-804.02.2--Use, Care, and Handling. The use, care, and handling of materials shall conform to the applicable requirements of Subsection 501.03.10 and the specific requirements of Subsections 907-804.02.4 and 907-804.02.5. Unless otherwise authorized, only fine aggregate or coarse aggregate of one type and from the same source shall be used in the construction of any one unit of a structure. Should the Contractor, with written permission of the Engineer, elect to substitute high early strength cement for cement of the type specified, the Contractor will not receive additional compensation for the substitution.

907-804.02.3--Blank.

907-804.02.4--Care and Storage of Concrete Aggregates. The handling and storage of aggregates shall be such as to prevent segregation or contamination with foreign materials. The Engineer may require that aggregates be stored on separate platforms at satisfactory locations.

When specified, coarse aggregates shall be separated into two or more sizes in order to secure greater uniformity of the concrete mixture. Different sizes of aggregate shall be stored in separate stock piles sufficiently removed from each other to prevent the material at the edges of the piles from becoming intermixed.

907-804.02.5--Storage of Cementitious Materials. All cementitious materials shall be stored in suitable weather-proof buildings or bins. These buildings or bins shall be placed in locations approved by the Engineer. Provision for storage shall be ample, and the shipments of cementitious materials as received shall be stored separately or other provisions made to the satisfaction of the Engineer for easy access for the identification, inspection, and sampling of each shipment as deemed desirable. Stored cementitious materials shall meet the test requirements at any time after storage when a retest is ordered by the Engineer.

On small jobs, open storage consisting of a raised platform and ample waterproof covering may be permitted by written authorization from the Engineer.

When specified, the Contractor shall keep accurate records of deliveries of cementitious materials and of their use in the work. Copies of these records shall be supplied in the form required by the Engineer.

907-804.02.6--Classification and Uses of Concrete. When a specific class of concrete is not specified on the plans or in the contract documents, the structure or parts thereof shall be constructed with the class of concrete as directed by the Engineer.

The classes and their uses are as follows:

- (1) Class AA - Concrete for bridge construction and concrete exposed to seawater.
- (2) Class A - Concrete shown as Class A shall herein be classified as and required to meet the performance criteria of Class AA.
- (3) Class B - General use, heavily reinforced sections, cast-in-place concrete piles, and conventional concrete piles.
- (4) Class C - Massive sections or lightly reinforced sections.
- (5) Class D - Massive unreinforced sections and riprap.
- (6) Class F - Concrete for prestressed members.
- (7) Class FX - Extra strength concrete for prestressed members, as shown on plans.
- (8) Class S - For all seal concrete deposited under water.
- (9) Class DS - Drilled Shaft

907-804.02.7--Blank.

907-804.02.8--Laboratory Accreditation. The Contractor shall be responsible for furnishing the laboratory used to perform concrete quality control tests. The laboratory may be the Contractor's facility, the concrete producer's facility, or a certified independent testing laboratory.

Only laboratories certified by the Mississippi Department of Transportation are qualified to perform material testing. Certification by AASHTO Accreditation Program (AAP) will be acceptable if the laboratory is listed in the latest AAP publication and maintains accreditation to completion of concrete work.

The Contractor's laboratory designated for quality control testing shall have equipment necessary to test aggregates and concrete for the test methods listed in Table 1.

Table 1

AASHTO: R 39	Making and Curing Concrete Test Specimens in the Laboratory
AASHTO: R 60	Sampling Freshly Mixed Concrete
AASHTO: T 2	Sampling Aggregates
AASHTO: T 19	Bulk Density ("Unit Weight") and Voids in Aggregates
AASHTO: T 22	Compressive Strength of Cylindrical Concrete Specimens
AASHTO: T 23	Making and Curing Concrete Test Specimens in the Field
AASHTO: T 27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO: T 84	Specific Gravity and Absorption of Fine Aggregate
AASHTO: T 85	Specific Gravity and Absorption of Coarse Aggregate
AASHTO: T 119	Slump of Hydraulic Cement Concrete
AASHTO: T 121	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
AASHTO: T 152	Air Content of Freshly Mixed Concrete by Pressure Method *
AASHTO: T 196	Air Content of Freshly Mixed Concrete by the Volumetric Method *
AASHTO: T 231	Capping Cylindrical Concrete Specimens
AASHTO: T 248	Reducing Field Samples of Aggregate to Testing Size
AASHTO: T 255	Total Evaporable Moisture Content of Aggregate by Drying

AASHTO: T 325	Standard Method of Test for Estimating the Strength of Concrete in Transportation Construction by Maturity Tests **
ASTM: C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete
ASTM: C 1074	Standard Practice for Estimating Concrete Strength by the Maturity Method **

* Equipment necessary for either pressure or volumetric air content.

** Equipment necessary for estimating concrete strength following the maturity method.

Testing equipment shall have been inspected by the Department or through the AASHTO Accreditation Program. Testing equipment calibration files shall be made available upon request by the Department.

907-804.02.9--Testing Personnel. Technicians testing portland cement concrete, for either acceptance or production control purposes, shall be certified by an accepted certification program. Recertification is required for each Class after five years. Certification requirements are listed in Table 2.

Table 2

Concrete Technician's Tasks	Test Method Required	Certification Required**
Sampling or Testing of Plastic Concrete	AASHTO Designation: R 60, T 23, T 119, T 121, T 152, T 196, and ASTM Designation: C 1064	MDOT Class I certification
Compressive Strength Testing of Concrete Cylinders	AASHTO Designation: T 22 and T 231	MDOT Concrete Strength Testing Technician certification
Sampling of Aggregates	AASHTO Designation: T 2	Work under the supervision of a MDOT Class II certified technician
Testing of Aggregates	AASHTO Designation: T 19, T 27, T 84, T 85, T 248, and T 255	MDOT Class II certification
Proportioning of Concrete Mixtures*	AASHTO Designation: M 157 and R 39	MDOT Class III certification
Interpretation and Application of Maturity Meter Readings	AASHTO Designation: T 325 and ASTM Designation: C 1074	MDOT Class III certification or Two hours maturity method training

* Technicians making concrete test specimens for meeting the requirements of Subsection 907-804.02.10.1.2 shall be MDOT Class I certified and under the direct supervision of an MDOT Class III certified technician.

** MDOT Class I certification encompasses the same test procedures and specifications as ACI Concrete Field Testing Technician-Grade I. MDOT Class II certification encompasses the same test procedures and specifications as ACI Aggregate Testing Technician-Level 1. MDOT Concrete Strength Testing Technician encompasses the same test procedures and specifications as ACI Concrete Strength Testing certification.

Specific requirements for each level of certification are in the latest edition of the Department's *Concrete Field Manual*. Current MDOT Class I, MDOT Class II, and/or MDOT Class III certifications shall be acceptable until those certifications expire. Upon expiration of a current certification, recertification with the certifications listed in Table 2 shall be required. Technicians performing either specific gravity testing of aggregates or compressive strength tests shall be required to either:

- have the required MDOT certification listed in Table 2, or
- have a current MDOT Class III certification or work under the direct supervision of current MDOT Class III technician, and have demonstrated the specific gravity and/or compressive strength test during the inspection of laboratory equipment by the Materials Division, Concrete Section.

907-804.02.10--Portland Cement Concrete Mixture Design. At least 10 days prior to production of concrete, the Contractor shall submit to the Engineer proposed concrete mixture designs complying with the Department's *Concrete Field Manual*. Materials shall be from approved sources meeting the requirements of the Standard Specifications. Proportions for the mixture designs shall be for the class concrete required by the contract plans and shall meet the requirements of the "Master Proportion Table for Structural Concrete Design" listed in Table 3. The concrete producer shall assign a permanent unique mixture number to each mixture design. Each mixture design shall be field verified as required in Subsection 907-804.02.10.3. Acceptable field verification data shall be required for final approval of a mixture design.

All concrete mixture designs will be reviewed by the Materials Division prior to use. Concrete mixture designs disapproved will be returned to the Contractor with a statement explaining the disapproval.

If the Contractor chooses to cure the concrete in accordance with the requirements listed under **Length of Time Defined by Development of Compressive Strength** in Subsection 907-804.03.17, the compressive strength/maturity relationship shall be developed for the mixture design for a minimum of 28 days following the requirements of Subsection 907-804.03.15. The compressive strength/maturity relationship information shall be submitted with the mixture design information.

Table 3
MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN

Class	Coarse Aggregate Size No.*	Maximum Water/Cementitious** Ratio	Specified Compressive Strength (f'_c) psi	Maximum Permitted Slump*** inches	Nominal Total Air Content**** %
AA*****	57 or 67	0.45**	4000	3***	4.5*****
B	57 or 67	0.50	3500	4	4.5
C	57 or 67	0.55	3000	4	4.5
D	57 or 67	0.70	2000	4	4.5
F	67	0.40	5000	3	*****
FX	67	(As per mixture design)	(As shown on plans)	3	*****
S	57 or 67	0.45	3000	8	4.5
DS	67	0.45	4000	***	*****

* Maximum size aggregate shall conform to the concrete mixture design for the specified aggregate. Other smaller coarse aggregate sizes meeting the requirements of Subsection 907-703.03.2.4 may also be used in conjunction with the coarse aggregate sizes listed. Lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 may also be used as a partial replacement for fine aggregate.

** The replacement limits of portland cement by weight by other cementitious materials (such as fly ash, GGBFS, silica fume, or others) shall be in accordance with the values in Subsection 907-701.02. Other hydraulic cements may be used in accordance with the specifications listed in Section 701.

For Class AA concrete for concrete bridge decks, the water / cementitious ratio range shall be 0.43 – 0.45 and the maximum cementitious material content shall be 550 pounds per cubic yard. The “maximum cementitious material content” refers to the total weight of Portland cement, blended hydraulic cement, GGBFS, silica fume, and fly ash.

*** Unless otherwise specified, minus slump requirements shall meet those set forth in Table 3 of AASHTO Designation: M157.

For Class AA concrete for concrete bridge decks the maximum permitted slump may be increased to five (5) inches. Also, for each additional pound of fibers per cubic yard added in excess of the requirement in Note ***** , an additional inch of slump will be allowed up to a maximum permitted slump of eight (8) inches.

For Class AA not used in bridge decks and all other Classes of concrete, the maximum permitted slump may be increased to eight (8) inches.

For Class DS concrete for drilled shafts the slump range shall be 8 inches $\pm$ 1 inch.

***** The tolerance on total air content shall be $\pm$ 1.5%. For Class AA concrete for concrete bridge decks, the nominal total air content may be increased to 6.5%.

***** For Class AA concrete for concrete bridge decks, an approved synthetic structural fiber meeting the requirements of Special Provision 907-711, Synthetic Structural Fiber Reinforcement, shall be incorporated into the mixture at 1.25 times the approved dosage rate.

***** Entrained air is not required except for concrete exposed to seawater. For concrete not exposed to seawater, the total air content shall not exceed 6.0%. For concrete exposed to seawater, the nominal total air content shall be 4.5%.

At least one water-reducing admixture or water-reducing/set-retarding admixture shall be used in all classes of concrete in accordance with the manufacturer's recommended dosage range. Admixtures providing a specific performance characteristic other than those of water reduction or set retardation may be used in accordance with the manufacturer's recommended dosage range. Mixture designs containing accelerating admixtures will not be approved. Any combinations of admixtures shall be approved by the Engineer before their use.

907-804.02.10.1--Proportioning of Portland Cement Concrete Mixture Design. Proportioning of portland cement concrete shall be based on an existing mixture of which the producer has field experience and documentation or based on a recently batched laboratory mixture tested according to the required specifications.

907-804.02.10.1.1--Proportioning on the Basis of Previous Field Experience of Trial Mixtures. Where a concrete production facility has a record, based on at least 10 consecutive strength tests from at least 10 different batches within the past 12 months from a mixture not previously used on Department projects, the standard deviation shall be calculated. The record of tests from which the standard deviation is calculated shall:

- a) Represent similar materials and conditions to those expected. Changes in materials and proportions within the test record shall not have been more closely restricted than those for the proposed work.
- b) Represent concrete produced to meet a specified strength.
- c) Consist of 10 consecutive tests, average of two cylinders per test, tested at 28 days.

The standard deviation, s , shall be calculated as:

$$s = \left[\sum (X_i - \bar{X})^2 \div (N - 1) \right]^{1/2}$$

where:

X_i = the strength result of an individual test

$\bar{X}$ = the average of individual tests in the series

N = number of tests in the series

When the concrete production facility does not have a record of tests for calculation of standard deviation, as required in the above formula, the requirements of Subsection 907-804.02.10.1.2 shall govern.

The required average compressive strength (f'_{cr}) used as the basis for selection of concrete proportions shall conform to the inequality listed below, while using a standard deviation, s , calculated as shown above.

$$\bar{X} \geq f'_{cr}$$

where:

$$f'_{cr} = f'_c + 1.43s$$

where:

f'_c = specified compressive strength of concrete, psi

f'_{cr} = required average compressive strength of concrete, psi

s = standard deviation, psi

1.43 represents the Lower Quality Index necessary to assure that 93% of compressive strength tests are above f'_c .

907-804.02.10.1.2--Proportioning on the Basis of Laboratory Trial Mixtures. When an acceptable record of field test results is not available, concrete proportions shall be established based on laboratory trial mixtures meeting the following restrictions:

- a) The combination of materials shall be those intended for use in the proposed work.
- b) Trial mixtures having proportions and consistencies suitable for the proposed work shall be made using the ACI 211.1 as a guide to proportion the mixture design.
- c) Trial mixtures shall be designed to produce a slump within $\pm 3/4$ inch of the maximum permitted, and for air-entrained concrete, ± 0.5 percent of the maximum total air content. The temperature of freshly mixed concrete in trial mixtures shall be reported.
- d) For each proposed mixture, at least three compressive test cylinders shall be made and cured in accordance with AASHTO Designation: R 39. Each change of water-cement ratio shall be considered a new mixture. The cylinders shall be tested for strength in accordance with AASHTO Designation: T 22 and shall be tested at 28 days.
- e) The required average strength of laboratory trial mixes shall exceed f'_c by 1200 psi for concrete mixture designs less than 5000 psi and by 1400 psi for concrete mixture designs of 5000 psi or more.

- f) The laboratory trial batch mixtures shall have been made within the previous 12 months before being submitted for approval and shall not have been previously used on Department projects.

907-804.02.10.2--Documentation of Average Strength. Documentation that the proposed concrete proportions will produce an average strength equal to or greater than the required average shall consist of the strength test records from field tests or results from laboratory trial mixtures.

907-804.02.10.3--Field Verification of Concrete Mixture Design. Concrete mixture designs will only be tentatively approved pending field verification. The requirements for yield, slump, or total air content shall be successfully met within the first three (3) production days. Mixture designs may be transferred to other projects without additional field verification testing, once the mixture design has passed the field verification process.

The Contractor's Certified Quality Control Technicians shall test each concrete mixture design upon the first placement of the mix. Aggregates and concrete tests during the first placement shall be as follows.

<u>Aggregates</u>	<u>Concrete</u>
Bulk Specific Gravity	Water Content
Moisture	Slump
Gradation	Air Content
	Unit Weight
	Yield

For all Classes of concrete, the mixture shall be verified to yield within 2.0% of the correct volume when all the mix water is added to the batch.

For all Classes of concrete other than DS, F, and FX, the mixture shall produce a slump within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"), and producing a total air content within a minus 1½ percent tolerance of the maximum allowable air content in Table 3.

For Class DS, the slump shall be within the requirements in Note *** below Table 3. For Class DS exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in Note ***** below Table 3. For Class DS not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

For Classes F and FX, the slump shall be within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"). For Classes F and FX exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in

Note ***** below Table 3. For Classes F and FX not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

The mixture shall be adjusted and retested, if necessary, on subsequent placements until the above mentioned properties are met.

If the requirements for yield, slump, or total air content are not met within the first three (3) production days, subsequent field verification testing shall not be permitted on Department projects, and the mixture design shall not be used until the requirements listed above are met. Any mixture design adjustments, changes in the mixture proportions, are to be made by a Class III Certified Technician representing the Contractor. After the mixture design has been verified and adjustments made, verification test results will be reviewed by the Engineer.

907-804.02.10.3.1--Slump Retention of Class DS Concrete Mixture Designs. Prior to concrete placement, the Contractor shall provide test results of a slump loss test using approved methods to demonstrate that the mixture meets the four hour requirement in Subsection 907-803.02.7.1. These tests shall be conducted successfully by an approved testing laboratory within 30 days prior to installation of the trial shaft, with personnel from the Materials Division present. The slump loss test shall be conducted at temperatures and conditions similar to those expected at the job site at the time of the installation of the trial shaft. The sample for the slump loss test shall be from a minimum batch size of four (4) cubic yards of concrete. If the time between the previous successful slump loss test and the installation of the trial shaft exceeds 30 days, another successful slump loss test shall be performed on the first truckload of concrete as part of the installation of the trial shaft. This requirement limiting the time between the previous slump loss test and an installation of the trial shaft also applies to Class DS concrete mixture designs being transferred from another project. During any shaft installation a slump loss test shall be conducted by the Contractor at the direction of the Engineer from the concrete at the site for verification of slump loss requirements using a sample from a minimum batch size of four cubic yards of concrete.

907-804.02.10.4--Adjustments of Mixtures. The mixture design may be adjusted by the Class III Certified Technician representing the Contractor in accordance with the allowable revisions listed in the Department's *Concrete Field Manual*, paragraph 5.7. Written notification shall be submitted to the Engineer a minimum of seven (7) days prior to any source or brand of material change, aggregate size change, allowable material type change, or decrease in any cementitious material content. Any adjustments of the concrete mixture design shall necessitate repeat of field verification procedure as described in Subsection 907-804.02.10.3 and approval by the Engineer.

907-804.02.11--Concrete Batch Plants. The concrete batch plant shall meet the requirements of the National Ready Mixed Concrete Association *Quality Control Manual, Section 3, Plant Certification Checklist* as outlined in the latest edition of the Department's *Concrete Field Manual*. The Contractor shall submit a copy of the approved checklist along with proof of calibration of batching equipment, i.e., scales, water meter, and admixture dispenser, to the Engineer 30 days prior to the production of concrete.

For projects with 1000 cubic yards and more, the concrete batch plant shall meet the requirements for an automatic system capable of recording batch weights. It shall also have automatic moisture

compensation for the fine aggregate. For projects of more than 200 but less than 1000 cubic yards the plant can be equipped for manual batching with a fine aggregate moisture meter visible to the plant operator.

The concrete batch plant shall have available adequate facilities to cool concrete during hot weather.

Mixer trucks to be used on the project are to be listed in the checklist and shall meet the requirements of the checklist.

907-804.02.12--Contractor's Quality Control. The Contractor shall provide and maintain a quality control program that will provide reasonable assurance that all materials and products submitted to the Department for acceptance will conform to the contract requirements, whether manufactured or processed by the Contractor or procured from suppliers, subcontractors, or vendors.

The Contractor's Quality Control program shall implement the minimum quality control requirements shown in Table 4, "CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL". The quality control activities shown in the table are considered to be normal activities necessary to control the production and placing of a given product or material at an acceptable quality level. To facilitate the Department's activities, all completed gradation samples shall be retained for a maximum of sixty (60) days by the Contractor until further disposition is designated by the Department.

The Contractor shall perform, or have performed, the tests required to substantiate product conformance to contract document requirements and shall also perform, or have performed, all tests otherwise required.

The Contractor's Quality Control program shall encompass the requirements of AASHTO Designation: M 157 into concrete production and control, equipment requirements, testing, and batch ticket information. The requirement of AASHTO Designation: M 157, Section 11.7 shall be followed except, on arrival to the job site, a maximum of 1½ gallons per cubic yard shall be allowed to be added. Water shall not be added at a later time. Job site adjustment of a batch using chemical admixtures or the mechanical adjustment of a batch may be performed by the Contractor if the requirements of Subsection 907-804.02.12.1.1 have been satisfactorily addressed in the Quality Control Plan. If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

The Contractor's quality control tests shall be documented and shall be available for review by the Engineer throughout the life of the contract.

As set out in these specifications, quality control sampling and testing performed by the Contractor will be used by the Department for determination of acceptability of the concrete.

The Contractor shall maintain standard equipment and qualified personnel as required to assure conformance to contract requirements.

907-804.02.12.1--Quality Control Plan. The Contractor shall prepare a Quality Control Plan which shall identify the personnel responsible for the Contractor's quality control including the company official who will act as liaison with Department personnel. The Quality Control Plan shall be submitted in writing to the Engineer for approval 30 days prior to the production of concrete.

The class(es) of concrete involved will be listed separately. If an existing mixture design(s) is to be used, the mixture design number(s) as previously approved shall be listed.

It is intended that sampling and testing be in accordance with standard methods and procedures, and that measuring and testing equipment be standard and properly calibrated. If alternative sampling methods and procedures, and inspection equipment are to be used, they shall be detailed in the Quality Control Plan.

907-804.02.12.1.1--Elements of Plan. The Plan shall address all elements that affect the quality of the structural concrete including, but not limited to, the following items:

- 1) Stockpile Management
- 2) Procedures for Corrective Actions for Non Compliance of Specifications
- 3) Procedure for Controlling Concrete Temperatures
- 4) Job Site Batch Adjustments by Addition of Chemical Admixtures:

The Plan shall address if the Contractor intends to adjust either the slump and/or total air content of a batch on the job site by adding chemical admixture(s) to a batch. The Contractor shall include the names of the personnel designated to perform this batch adjustment, the equipment used to add the chemical admixture(s), and the procedure by which the batch adjustment will be accomplished. Only the Contractor's designated personnel shall adjust a batch. Only calibrated dispensing equipment shall be used to add chemical admixture(s) to a batch. Only the procedure described in this section of the Plan shall be utilized.

If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

If the Contractor elects to utilize Job Site Batch Adjustments by Addition of Chemical Admixture within Item 2, Procedures for Corrective Actions for Non Compliance of Specifications, to adjust batches which do not meet the minimum specification requirements for slump and/or total air content, no more than three batches on any one project shall be allowed to be adjusted regardless of the number of mixtures associated with the project.

- 5) Construction of Concrete Bridge Decks, including the following:

- the description of the equipment used for placing concrete on the bridge deck in accordance with Subsection 907-804.03.6 and, as applicable, Subsections 907-804.03.7 and 907-804.03.8 including any accessories added to the pump to ensure the entrained air in the concrete mixture remains entrained during pumping and depositing of the concrete mixture,
- the description of and the number of pieces of equipment used to consolidate the concrete in accordance with Subsection 907-804.03.6.2,
- the description of the equipment used to finish the bridge deck in accordance with Subsection 907-804.03.19.7,
- the plan for ensuring a continuous rate of finishing the bridge deck without delaying the application of curing materials within the time specified in Subsection 907-804.03.17, including ensuring a continuous supply of concrete throughout the placement with an adequate quantity of concrete to complete the deck and filling diaphragms and end walls in advance of deck placement,
- the plan for applying the curing materials within the time specified in Subsection 907-804.03.17,
- the description of the powered fogging equipment in accordance with Subsection 907-804.03.17,
- a sample of the documentation used as the daily inspection report for ensuring maintenance of the continuous wet curing in accordance with Subsection 907-804.03.17, as required,
- the description of the equipment used to apply the liquid membrane, including but not limited to, the nozzles, pumping/pressurization equipment, and liquid membrane tanks, in accordance with Subsection 907-804.03.17,
- the method for determining the rate of applied liquid membrane meets the application rate requirements in accordance with Subsection 907-804.03.17,
- a sample of the documentation used for the application rate verification of the liquid membrane in accordance with Subsection 907-804.03.17.

6) Mechanical Adjustment of Trucks

907-804.02.12.2--Personnel Requirements. The Contractor's Designated Certified Technician shall perform and use quality control tests and other quality control practices to assure that delivered materials and proportioning meet the requirements of the mixture design including temperature, slump, air content, and strength and shall periodically inspect all equipment used in transporting, proportioning, and mixing.

The Contractor's Designated Technician shall periodically inspect all equipment used placing, consolidating, finishing, and curing to assure it is operating properly and that placement, consolidation, finishing, and curing conform to the mixture design and other contract requirements.

907-804.02.12.3--Documentation. The Contractor shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations made, the number and type of deficiencies found, date and time of samples taken, the quantities approved and rejected, and the nature of corrective action taken as appropriate. The Contractor's

documentation procedures will be subject to approval of the Department prior to the start of the work and to compliance checks during the progress of the work.

All conforming and non-conforming results shall be kept complete and shall be available at all times to the Department during the performance of the work. Forms shall be on a computer-acceptable medium. Batch tickets and gradation data shall be documented in accordance with Department requirements.

Batch tickets shall contain all the information in AASHTO Designation: M157, Section 16 including the additional information in Subsection 16.2 with the following exception: the information listed in paragraphs 16.2.7 and 16.2.8 is not required. All material added to a batch by both the batch plant or added manually shall be documented on the ticket. Batch tickets shall also contain the concrete producer's permanent unique mixture number assigned to the concrete mixture design. Copies shall be submitted to the Department as the work progresses.

Test data for portland cement concrete, including gradation, shall be charted in accordance with the applicable requirements.

The Contractor may use additional control charts as deemed appropriate. It is normally expected that testing and charting will be completed within 24 hours after sampling.

All records documenting the Contractor's quality control tests shall become the property of the Department upon completion of the work.

907-804.02.12.4--Corrective Action. The Contractor shall take prompt action to correct conditions that have resulted, or could result, in the submission to the Department of materials and products that do not conform to the requirements of the contract documents. All corrective actions shall be documented.

907-804.02.12.5--Non-Conforming Materials. The Contractor shall establish and maintain an effective and positive system for controlling non-conforming material, including procedures for its identification, isolation and disposition. Reclaiming or reworking of non-conforming materials shall be in accordance with procedures acceptable to the Department.

All non-conforming materials and products shall be positively identified to prevent use, shipment, and intermingling with conforming materials and products. Holding areas, mutually agreeable to the Department and the Contractor, shall be provided by the Contractor.

TABLE 4
CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL

Portland Cement Concrete		
Control Requirement	Frequency	AASHTO/ASTM Designation
A. PLANT AND TRUCKS 1. Mixer Blades 2. Scales a. Tared b. Calibrate c. Check Calibration 3. Gauges & Meters - Plant & Truck a. Calibrate b. Check Calibration 4. Admixture Dispenser a. Calibrate b. Check Operation & Calibration	Monthly Daily Every 6 months Weekly Every 6 months Weekly Every 6 months Daily	
B. AGGREGATES 1. Sampling 2. Fine Aggregate a. Gradation / FM b. Moisture c. Specific Gravity / Absorption 3. Coarse Aggregates a. Gradation b. Moisture c. Specific Gravity / Absorption	250 yd ³ concrete Check meter against test results weekly 2500 yd ³ concrete 250 yd ³ concrete Minimum of once daily or more as needed to control production. Check meter against test results weekly. 2500 yd ³ Concrete	T 2 T 27 T 255 T 84 T 27 T 255 T 85
C. PLASTIC CONCRETE 1. Sampling 2. Air Content 3. Slump 4. Compressive Strength 5. Yield 6. Temperature	First load then one per 50 yd ³ First load then one per 50 yd ³ A minimum of one set (three cylinders) for each 100 yd ³ inclusive and one set for each additional 100 yd ³ or fraction thereof for each class concrete delivered and placed on a calendar day from a single supplier. A test shall be the average of three cylinders. Each 400 yd ³ With each sample	T 141 T 152 or T 196 T 119 T 22, T 23, T 231 T 121 C 1064

907-804.02.13--Quality Assurance Sampling and Testing. Quality Assurance (QA) inspection and testing will be provided by the Department to assure that the Contractor's Quality Control (QC) testing meets the requirements of these specifications.

Acceptance of the material is based on the inspection of the construction, monitoring of the Contractor's QC program, QC and QA test results per Subsection 907-804.02.13.1, and the comparison of the QA test results with the QC test results. The Department may use the results of the Contractor's QC tests as a part of the acceptance procedures instead of the results of QA tests, provided:

- a) The Department's inspection and monitoring activities indicate that the Contractor is following the approved QC program and, respectively,
- b) For aggregates, the results from the Contractor's QC and the Department's QA testing of aggregate gradations compare by both meeting the aggregate type's gradation requirements;
- c) For concrete, the Contractor's QC and Department's QA testing of concrete compressive strengths compare when using the data comparison computer program with an alpha value of 0.01 for projects with 1000 cubic yards and more; or, strength comparisons are within 990 psi for projects of more than 200 but less than 1000 cubic yards.

The minimum frequency for QA testing of aggregate and plastic concrete by the Department will follow the frequencies listed in Table 5, "DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE".

TABLE 5
DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE

Quality Assurance Tests	Frequency	AASHTO/ASTM Designation
A. AGGREGATES		
1. Sampling		T 2
2. Fine Aggregate Gradation and FM	250 yd ³ concrete	T 27
3. Coarse Aggregates Gradation	250 yd ³ concrete	T 27
B. PLASTIC CONCRETE		
1. Sampling		T 141
2. Air Content	Every 100 yd ³	T 152 or T 196
3. Slump	Every 100 yd ³	T 119
4. Compressive Strength	One set (three cylinders) for every 100 yd ³ inclusive. A test shall be the average of three cylinders.	T 22, T 23, T 231
5. Temperature	With each sample	C 1064

Periodic inspection by the Department of the Contractor's QC testing and production will continue through the duration of the project. Weekly reviews will be made of the Contractor's QC records and charts.

For aggregates, comparison of data of the Contractor's QC aggregate gradation test results to those of the Department's QA aggregate gradation test results will be made monthly during concrete

production periods according to Department Standard Operating Procedures. When it is determined that the Contractor's QC test results of aggregate gradations are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the aggregates and the Department's QA testing frequency of aggregates may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC aggregate gradation test results fail to compare to those of the Department's QA aggregate gradation test results, Department testing for aggregate gradations will revert to the frequency shown in Table 5 for aggregates until the Contractor's and Department's aggregate gradation test data compare.

For concrete compressive strength, comparison of data of the Contractor's QC compressive strength test results to those of the Department's QA compressive strength test results will be made monthly during concrete production periods according to Department's *Concrete Field Manual*. When it is determined that the Contractor's QC test results of concrete compressive strengths are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the concrete and the Department's QA testing frequency of concrete compressive strengths may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC compressive strength test results fail to compare to those of the Department's QA compressive strength test results, Department testing will revert to the frequency shown in Table 5 for plastic concrete until the Contractor's and Department's compressive strength test data compare.

907-804.02.13.1--Job Control Testing.

907-804.02.13.1.1--Sampling. Sampling of concrete mixture shall be performed in accordance with the latest edition of the Department's *Concrete Field Manual*.

907-804.02.13.1.2--Slump. Slump of plastic concrete shall meet the requirements of Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.3--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.4--Yield. If the yield of the concrete mix design is more than plus or minus three percent ($\pm 3\%$) of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus three percent ($\pm 3\%$). If batching of the proportions of the mixture design varies outside the batching tolerance range of the originally approved proportions by more than the tolerances allowed in Subsection 907-804.02.12, the new proportions shall be field verified per Subsection 907-804.02.10.3.

907-804.02.13.1.5--Temperature. Cold weather concreting shall follow the requirements of Subsection 907-804.03.16.1. Hot weather concreting shall follow the requirements of Subsection

907-804.03.16.2. Concrete with a temperature more than the maximum allowable temperature shall be rejected and not used in Department work.

The maximum acceptance temperature for Class DS concrete mixtures is 95°F.

The maximum acceptance temperature of Class C concrete mixtures is 100°F for mixtures meeting the cement replacement requirements of Subsection 907-701.02.2. For Class C concrete mixtures that do not meet the cement replacement requirements of Subsection 907-701.02.2, the maximum acceptance temperature is 95°F.

The maximum acceptance temperature for all other concrete mixtures meeting the cement replacement requirements of Subsection 907-701.02.2 is 95°F. The maximum acceptance temperature for all other concrete mixtures which do not meet the cement replacement requirements of Subsection 907-701.02.2 is 90°F.

907-804.02.13.1.6--Compressive Strength. Standard cured concrete compressive strength tests shall conform to the specified strength (f'_c) listed in the specifications. Concrete represented by compressive strength test below the specified strength (f'_c) may be removed and replaced by the Contractor. If the Contractor elects not to remove the material, it will be evaluated by the Department as to the adequacy for the use intended. All concrete evaluated as unsatisfactory for the intended use shall be removed and replaced by the Contractor at no additional cost to the Department. For concrete allowed to remain in place, reduction in payment will be as follows:

Projects with 1000 Cubic Yards and More. When the evaluation indicates that the work may remain in place, a statistical analysis will be made of the QC and QA concrete test results. If this statistical analysis indicates at least 93% of the material would be expected to have a compressive strength equal to or greater than the specified strength (f'_c) and 99.87% of the material would be expected to have a compressive strength at least one standard deviation above the allowable design stress (f_c), the work will be accepted. If the statistical analysis indicates that either of the two criteria are not met, the Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c - (f_c + s)} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

s = standard deviation, psi*

f_c = allowable design stress, psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

* Standard deviation used in the above reduction of pay formula shall be calculated from the applicable preceding compressive strengths test results plus the individual compressive strength below f'_c . If below f'_c strengths occur during the project's first ten compressive strength tests, the standard deviation shall be calculated from the first ten compressive strength tests results.

Projects of More Than 200 but Less Than 1000 Cubic Yards. When the evaluation indicates that the work may remain in place, a percent reduction in pay will be assessed based on a comparison of the deficient 28-day test result to the specified strength. The Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

907-804.02.14--Dispute Resolution. Disputes over variations between Contractor's QC test results and the Department's QA test results shall be resolved at the lowest possible level using the latest edition of the Department's *Concrete Field Manual*. When there are significant discrepancies between the QC test results and the QA test results, the Contractor's QC Manager, the Project Engineer, and/or the District Materials Engineer shall look for differences in the procedures, and correct the inappropriate procedure before requesting a third party resolution.

If the dispute cannot be resolved at the project or District level, the Department's Materials Division will serve as a third party to resolve the dispute. The Materials Division's decision shall be binding.

The Contractor shall be responsible for the cost associated with the third party resolution if the final decision is such that the Department's QA test results were correct. Likewise, the Department will be responsible for the cost when the final decision is such that the Contractor's QC test results were correct.

907-804.03--Construction Requirements.

907-804.03.1--Measurement of Materials.

907-804.03.1.1--General. The accuracy for measuring materials shall be in accordance with AASHTO Designation: M 157.

907-804.03.1.2--Measurement by Weighing. Except when otherwise specified or authorized, the materials shall be measured by weighing. The apparatus provided for weighing materials shall be

suitably designed and constructed for this purpose. Cementitious materials and aggregates shall be weighed separately. Cement in standard bags need not be weighed, but bulk cement and other cementitious materials shall be weighed. The mixing water shall be measured by volume or by weight. All measuring devices shall be subject to approval.

907-804.03.2--Blank.

907-804.03.3--Blank.

907-804.03.4--Hand Mixing. Hand mixing of concrete will not be allowed.

907-804.03.5--Delivery. The plant supplying concrete shall have sufficient capacity and transporting apparatus to ensure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper continuity in handling, placing, and furnishing of the concrete. The rate shall be such that the interval between batches shall not exceed 20 minutes. The methods of delivering and handling the concrete shall be that which will facilitate placing with minimum re-handling and without damage to the structure or the concrete.

907-804.03.6--Handling and Placing Concrete.

907-804.03.6.1--General. Prior to placing concrete, all reinforcement shall have been accurately placed in the position shown on the plans and fastened as set out in Section 805. All sawdust, chips, and other construction debris and extraneous matter shall have been removed from the interior of the forms. Temporary struts, braces, and stays holding the forms in correct shape and alignment shall be removed when the concrete placing has reached an elevation rendering their service unnecessary. These temporary members shall be entirely removed from the forms and shall not be buried in the concrete.

No concrete shall be placed until the forms and reinforcement have been inspected.

Except as provided for truck mixers and truck agitators, concrete shall be placed in the forms within 30 minutes after the time that the cement is first added to the mixture.

Concrete shall be placed so as to avoid segregation of materials and displacement of reinforcement. The use of troughs, chutes, and pipes over 25 feet in length for gravity conveyance of concrete to the forms, will not be permitted except when authorized by the Engineer and subject to the production of quality concrete.

Only approved mechanical conveyors will be permitted.

Open troughs and chutes shall be metal or metal lined. The use of aluminum pipes, chutes, or other devices made of aluminum that come into direct contact with the concrete shall not be used. Where steep slopes are required, the chutes shall be equipped with baffles or be in short sections that change the direction of movement.

All chutes, troughs, and pipes shall be kept clean and free from coatings of hardened concrete by thoroughly flushing with water after each run. Water used for flushing shall be discharged clear of the structure.

When placing operations involve dropping the concrete more than five feet, it shall be deposited through sheet metal or other approved pipes to prevent segregation and unnecessary splashing. The pipes shall be made in sections to permit discharging and raising as the placement progresses. A non-jointed pipe may be used if sufficient openings of the proper size are provided to allow for the flow of the concrete into the shaft. As far as practicable, the pipes shall be kept full of concrete during placing, and their ends shall be kept buried in the newly placed concrete.

Except as herein provided, concrete shall be placed in horizontal layers not more than 12 inches thick. When, with the Engineer's approval, less than the complete length of a layer is placed in one operation, it shall be terminated in a vertical bulkhead. Each layer shall be placed and compacted before the preceding layer has taken its initial set and shall be compacted so as to avoid the formation of a construction joint with the preceding layer.

If the Department determines that there is an excessive number of projections, swells, ridges, depressions, waves, voids, holes, honeycombs, or other defects in the completed structure, removal of the entire structure may be required as set out in Subsection 105.12.

907-804.03.6.2--Consolidation. Immediately after depositing the concrete mixture, the concrete mixture shall be thoroughly consolidated by the use of approved mechanical vibrators and suitable spading tools. Only concrete mixture which has not achieved initial set shall be consolidated. Hand spading alone will be permitted on small structural members such as railing, small culvert headwalls, and as necessary to ensure smooth surfaces and dense concrete along form surfaces, in corners, and in locations impossible to reach with vibrators. When hand spading is used for consolidation, a sufficient number of workmen with spading tools shall be provided. For hand spading, flush a thin layer of mortar to all the surfaces and thoroughly and satisfactorily consolidate the concrete.

The Contractor shall conduct operations of depositing and consolidating the concrete mixture such that the operation produces concrete which is uniformly smooth and dense, having no honeycombing or pockets of segregated aggregate.

Movement of personnel through the consolidated concrete shall not be permitted. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.

907-804.03.6.2.1--Requirements for Vibrators. Mechanical vibrators shall be subject to the following:

1. To verify compliance with these requirements, the Contractor shall provide the Engineer with a copy of the manufacturer's specifications for each type and brand of vibrator used on the project.

2. The Contractor shall provide a sufficient number of personnel with vibrators to properly consolidate each batch immediately after the concrete is placed in the forms. The Contractor shall provide at least one stand-by vibrator and required power source.
3. Concrete having been consolidated shall not be walked in or through. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.
4. Internal vibrators shall be of the spud or tube type, meeting the following characteristics and performance:
 - a. The diameter of the head of the vibrator shall be 1¼ to 2½ inches.
 - b. The frequency of vibration shall be 8000 to 12000 vibrations per minute (Hz) while operating in the concrete.
 - c. The average amplitude shall be 0.025 to 0.05 inch while operating in air.
 - d. The minimum radius of influence shall be seven (7) inches.
 - e. The length of the vibrator head shall be nearly equal to the depth of the layer of concrete placed.
5. When the reinforcing steel is coated with epoxy, internal vibrators with heads of rubber or other resilient material shall be used. Rubber covers securely fastened over steel heads shall be acceptable.
6. For consolidation of concrete used in concrete bridge decks, the following additional requirements shall apply:
 - a. Only internal vibration shall be used.
 - b. Internal vibrators shall all be of the same type and size.
 - c. The configuration of the internal vibrators shall meet the requirements of Subsection 907-804.03.6.2.3.

907-804.03.6.2.2--Operation of Internal Vibration. Mechanical vibrators used for internal vibration shall be operated as follows:

1. Vibrators shall not be dragged or moved laterally through the concrete to transport concrete. Vibrators shall not be used in such a manner that the concrete segregates or forms pockets of grout. Vibrators shall not be applied directly or through the reinforcement to sections or layers of concrete which have taken initial set.
2. Vibrators shall only be inserted into the concrete while operating and at the point of placement to consolidate the concrete for such a length of time that there is a general cessation in the escape of large entrapped air bubbles at the surface.
3. Vibrators shall be inserted slowly into the concrete and allowed to penetrate into the concrete under their own weight.
4. Vibrators shall be inserted into the concrete while they are in a vertical position with enough flexibility to work themselves around the reinforcing steel.
5. The head of the vibrator shall be completely submerged in the concrete for a time of consolidation between 3 and 15 seconds prior to removal, unless otherwise defined by the Engineer.
6. For consolidation of two or more layers of concrete, the vibrator shall be inserted into the bottom most layer at least six (6) inches. The vibrator shall be manipulated in a series of up-and-down motions to knit the layers together.

7. Vibrators shall be removed slowly from the concrete after the consolidation has been accomplished. However, once the head of the vibrator has become only partially immersed in the concrete, vibrators shall be removed rapidly.
8. The insertions of the vibrators shall be systematically spaced such that the entire surface of the concrete comes under the influence of the vibrator during consolidation. This includes areas around the reinforcing steel, imbedded fixtures, the corners and angles of forms, and any irregular areas. The distance between insertions shall not exceed 1.5 times the radius of influence such that the area visibly affected by the vibrator overlaps the adjacent, just-vibrated area.
9. For additional information, refer to ACI 309-07, Chapter 7, Sections 7.1 through 7.3

907-804.03.6.2.3--Method of Consolidation. It is anticipated the Contractor will accomplish consolidation by internal vibration using one of the following two methods: vibrators mounted on a mechanical device or an orchestrated effort utilizing personnel. Regardless of the chosen method, the method shall be included in the QCP in accordance with Subsection 907-804.02.12.1.1.5 and shall only receive tentative approval until the method is demonstrated as effectively meeting the requirements of Subsection 907-804.03.6.2.

907-804.03.6.3--Discontinuance of Placing. When placing is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints insofar as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel. Where a "feather edge" might be produced at a construction joint, such as in the sloped top surface of a wing wall, an inset form work shall be used in the preceding layer to produce a blocked out portion that will provide an edge thickness of at least six inches (6") in the succeeding layer. Work shall not be discontinued within 18 inches of the top of any face unless provision has been made for a coping less than 18 inches thick. In this case and if permitted by the Engineer, the construction joint may be made at the underside of the coping.

Immediately following the discontinuance of placing concrete, all accumulations of mortar splashed on the reinforcement and the surface of forms shall be removed. Dried mortar chips and dust shall not be puddled into the unset concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to break or injure the concrete-steel bond at and near the surface of the concrete while cleaning the reinforcement. After initial set the forms shall not be jarred, and no strain shall be placed on the ends of projecting reinforcement until the concrete has sufficiently set to ensure against any damage by such jarring or strain.

907-804.03.6.4--Placing Bridge Concrete. The method and sequence of placing concrete shall conform to the provisions and requirements set forth for the particular type of construction.

907-804.03.6.4.1--Foundations and Substructures. Concrete seals shall be placed in accordance with Subsection 907-804.03.9. All other concrete for foundations shall be poured in the dry unless otherwise stipulated or authorization is given in writing by the Engineer to do otherwise. Concrete shall not be placed in foundations until the foundation area has been inspected and approved.

Unless otherwise specified, the placement of concrete in the substructure shall be in accordance with the general requirements of Subsection 907-804.03.6.

Unless otherwise directed, concrete in columns shall be placed in one continuous operation, and shall be allowed to set at least 12 hours before the caps are placed.

907-804.03.6.4.2--Superstructure. For simple spans, concrete shall preferably be deposited by beginning at the center of the span and working toward the ends. For continuous spans, concrete shall be deposited as shown on the plans. Concrete in girders shall be uniformly deposited for the full length of the girder and brought up evenly in horizontal layers. Concrete in areas below the bridge deck but being deposited at the same time as concrete for the bridge deck, like a diaphragm, shall be placed and consolidated sufficiently ahead of placing the concrete for the bridge deck such that the placing, consolidating, finishing, and curing of concrete for the bridge deck shall not be impeded or slowed.

Unless otherwise permitted by the Engineer, concrete shall not be placed in the superstructure until the column forms have been stripped sufficiently to determine the character of the concrete in the columns. Unless otherwise permitted by the Engineer, the load of the superstructure shall not be placed on pile bents until the caps have been in place at least seven (7) days and shall not be placed on other types of bents until the bents have been in place at least 14 days.

In placing concrete around steel shapes, it shall be placed on one side of the shape until it flushes up over the bottom flange of the shape on the opposite side, after which it shall be placed on both sides to completion.

Concrete in girder haunches less than three feet (3') in height shall be placed at the same time as that in the girder stem. Whenever a haunch or fillet has a height of three feet (3') or more at the abutment or columns, the haunch and the girder shall be poured in three successive stages: first, up to the lower side of the haunch; second, to the lower side of the girder; and third, to completion.

Except when intermediate construction joints are specified, concrete in slab, T-beam, or deck-girder spans shall be placed in one continuous operation for each span.

The floors and girders of through-girder superstructures shall be placed in one continuous operation unless otherwise specified, in which case special shear anchorage shall be provided to ensure monolithic action between girder and floor.

Concrete in box girders shall be placed as shown on the plans.

Concrete shall not be chuted directly into the forms of the span and shall be placed continuously with sufficient speed to be monolithic and to allow for finishing before initial set.

907-804.03.6.4.3--Bridge Deck. When using the Transverse Method in accordance with Subsection 907-804.03.19.7.3, the period of time between concrete placement and completion of the final curing shall be kept to a minimum, as directed by the Engineer.

907-804.03.7--Pneumatic Placing. Pneumatic placing of concrete will be permitted only if specified in the contract or if authorized by the Engineer. The equipment shall be so arranged that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by pneumatic means the equipment shall be suitable in kind and adequate in capacity for the work. The machine shall be located as close as practicable to the place of deposit. The position of the discharge end of the line shall not be more than 10 feet from the point of deposit. The discharge lines shall be horizontal or inclined upwards from the machine. At the conclusion of placement the entire equipment shall be thoroughly cleaned.

907-804.03.8--Pumping Concrete. Placement of concrete by pumping will be permitted only if specified in the contract or if authorized in writing by the Engineer. If used, the equipment shall be arranged so that no vibrations result which might damage freshly placed concrete.

Where concrete mixture is conveyed and placed by mechanically applied pressure (pumping), the equipment shall be suitable in kind and adequate in capacity for the work. The Contractor shall select concrete mixture proportions such that the concrete mixture is pumpable and placeable with the selected equipment.

The pumping equipment shall be thoroughly cleaned prior to concrete placement. Excess form release agent shall be removed from the concrete pump hopper. The Contractor shall prime the pump at no additional cost to the Department by pumping and discarding enough concrete mixture to produce a uniform mixture exiting the pump. At least 0.25 cubic yard of concrete mixture shall be pumped and discarded to prime the pump. Only concrete mixture shall be added directly into the concrete pump hopper after placement has commenced. If anything other than concrete mixture is added to the concrete pump hopper, all concrete mixture in the concrete pump hopper and pump line shall be discarded and the pump re-primed at no additional cost to the Department.

The discharge end of the pump shall be of such a configuration that the concrete does not move in the pump line under its own weight. The intent of this requirement is to ensure that entrained air in the concrete mixture remains entrained during pumping and depositing the concrete mixture. This shall be accomplished with one or both of the following:

- a minimum 10-foot flexible hose attached to the discharge end of a steel reducer having a minimum length of three (3) feet and a minimum reduction in area of 20% which is attached to the discharge end of the pump line, or
- a flexible reducing hose to the discharge end of the pumpline with a minimum reduction in area of 20% over a minimum 10-foot hose length.

Regardless of the configuration chosen, the Contractor shall ensure that the concrete is pumped and does not free-fall more than five (5) feet within the entire length of pump line and after discharge from the end of pump line.

The Contractor shall not have any type of metal elbow, metal pipe, or other metal fitting within five (5) feet of any person during discharge of concrete mixture.

Boom pumps shall have a current Concrete Pump Manufacturers Association's ASME/ANSI B30.27 certification. Equipment added to the boom and pump line shall meet the pump manufacturer's specifications and shall not exceed the manufacturer's maximum recommended weight limit for equipment added to the boom and pump line.

The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe line, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned.

The use of aluminum pipe as a conveyance for the concrete will not be permitted.

907-804.03.9--Depositing Concrete Under Water. Concrete shall not be deposited in water except with the approval of the Engineer.

Concrete deposited under water shall be Class S.

Concrete deposited under water shall be carefully placed in a compact mass in its final position by means of a tremie, a bottom dump bucket, or other approved method and shall not be disturbed after being deposited. Special care shall be exercised to maintain still water at the point of deposit. No concrete shall be placed in running water and all form work designed to retain concrete under water shall be water-tight. The consistency of the concrete shall be carefully regulated, and special care shall be exercised to prevent segregation of materials.

Concrete seals shall be placed continuously from start to finish, and the surface of the concrete shall be kept as nearly horizontal as practicable at all times. To ensure thorough bonding, each succeeding layer of a seal shall be placed before the preceding layer has taken initial set.

When a tremie is used, it shall consist of a tube having a diameter of at least 10 inches and constructed in sections having flanged couplings fitted with gaskets. The means of supporting the tremie shall be such as to permit the free movement of the discharge over the entire top surface of the work and to permit it to be lowered rapidly when necessary to choke off or retard the flow of concrete. The discharge end shall be closed at the start of the work so as to prevent water entering the tube and shall be entirely sealed. The tremie tube shall be kept full to the bottom of the hopper. When a batch is dumped into the hopper, the flow of concrete shall be induced by slightly raising the discharge end, always keeping it in the deposited concrete. The flow is then stopped by lowering the tremie. The flow shall be continuous until the work is completed.

Depositing of concrete by the drop bottom bucket method shall conform to the following: The top of the bucket shall be open. The bottom doors shall open freely downward and outward when tripped. The bucket shall be completely filled and slowly lowered to avoid backwash. It shall not be dumped until it rests on the surface upon which the concrete is to be deposited and when discharged shall be withdrawn slowly until well above the concrete.

Dewatering may proceed when the concrete seal is sufficiently hard and strong. As a general rule, this time will be 48 hours for concrete made with high-early-strength cement and three days for concrete made with other types of cement. All laitance and other unsatisfactory material shall be removed from the exposed surface by scraping, chipping, or other means which will not injure the surface of the concrete.

907-804.03.10--Construction Joints.

907-804.03.10.1--General. Unless otherwise approved by the Engineer, construction joints shall be made only where located on the plans or shown in the pouring schedule. If not detailed on the plans, or in the case of emergency, construction joints shall be placed as directed by the Engineer. Shear keys or inclined reinforcement shall be used where necessary to transmit shear or to bond the two sections together.

For continuous spans, bridge deck concrete shall be deposited as shown on the plans. Deviation from the pouring schedule shown in the plans is not permitted.

907-804.03.10.2--Bonding. Before depositing new concrete on or against concrete which has hardened, the forms shall be retightened. The surface of the hardened concrete shall be roughened as required by the Engineer and in a manner that will not leave loosened particles of aggregate or damaged concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance and saturated with water. When directed by the Engineer, the cleaned and saturated surfaces, including vertical and inclined surfaces, shall first be thoroughly covered with a coating of mortar or neat cement grout against which the new concrete shall be placed before the grout has attained its initial set.

The placing of concrete shall be carried continuously from joint to joint. The face edges of all joints which are exposed to view shall be carefully finished, true to line and elevation.

In order to bond successive courses suitable depressed or raised keys of the designated size shall be constructed. Raised keys shall be monolithic with the concrete of the lower course.

907-804.03.11--Concrete Exposed to Seawater. Unless otherwise specifically provided, concrete for structures exposed to seawater shall be Class AA concrete as referenced in Subsection 907-804.02.10. The clear distance from the face of the concrete to the nearest face of reinforcing steel shall be at least four inches. The mixing time and the water content shall be carefully controlled and regulated so as to produce concrete of maximum impermeability. The concrete shall be thoroughly compacted, and stone pockets shall be avoided. No construction joints shall be formed between the levels of extreme low water and extreme high water as determined by the Engineer. Between these levels, seawater shall not come in direct contact with the new concrete until at least 30 days have elapsed. The surface concrete as left by the forms shall be left undisturbed.

907-804.03.12--Blank.

907-804.03.13--Falsework. The Contractor shall submit to the Engineer four copies of structural design analysis and detail drawings, which show the method of falsework or centering. These designs and detail plans shall be prepared and bear the seal of a Registered Professional Engineer with experience in falsework design.

Falsework plans shall include falsework elevations together with all other dimensions and details which is considered necessary for the construction. Other pertinent data needed is size and spacing of all falsework members and minimum bearing requirements for false piles.

Upon completion of falsework erection, the Registered Professional Engineer shall certify that the erected falsework is capable of supporting the load for construction.

Falsework piling shall be spaced and driven so that the bearing value of each pile is sufficient to support the load that will be imposed upon it. The bearing value of the piles should be calculated according to the appropriate formula given in Section 803.

For designing falsework and centering, a weight of 150 pounds per cubic foot shall be assumed for green concrete. All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads without appreciable settlement or deformation. The Contractor may be required to employ screw jacks or hardwood wedges to take up slight settlement in the falsework either before or during the placing of concrete. An allowance shall be made for anticipated compressibility of falsework and for the placement of shims, wedges, or jacks to produce the permanent structural camber shown on the plans. If during construction, any weakness develops and the falsework shows any undue settlement or distortion, the work shall be stopped, the part of the structure affected removed, and the falsework strengthened before work is resumed. Falsework which cannot be founded on a satisfactory footing shall be supported on piling, which shall be spaced, driven, and removed, as referenced in Subsection 907-804.03.15, in a manner approved by the Engineer.

All structures built across a public street or highway on which maintenance of traffic is required, shall have falsework so arranged that a vertical clearance of at least 12' 6" is provided. Unless otherwise specified, a horizontal clearance of at least the width of the traveled way shall be provided at all times. If the vertical clearance is less than 13' 6" or the horizontal clearance is less than the full crown width of the roadway, the Contractor shall install and maintain appropriate safety devices, clearance signs and warning lights, and shall notify the Engineer sufficiently in advance of restricting the clearance for the Engineer to advise both the Traffic Engineering and the Maintenance Divisions. All traffic control and safety devices shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

907-804.03.14--Forms.

907-804.03.14.1--General. Forms shall be wood, metal, or other material approved by the Engineer. All forms shall be built mortar-tight and sufficiently rigid to prevent distortion due to pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the opening of joints due to shrinkage. The forms shall be substantial and unyielding and shall be so designed that the finished concrete

will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

Minimum requirements for slab overhang forms shall be 3/4-inch plywood supported on 2-inch x 6-inch S4S wood timbers placed flatwise on 16-inch centers.

Adjustable brackets for support of slab overhang forms shall be spaced at a maximum distance of 3' 0" center to center unless specifically approved otherwise. Grade points for forms shall coincide with the location of the adjustable form brackets.

Forms for surfaces exposed to view shall be of uniform thickness with a smooth inside surface of an approved type. Joints in forms for exposed surfaces shall be closely fitted to eliminate fins, stone pockets, or other variations in the surface of the concrete which would mar a smooth and uniform texture.

Forms shall be filleted at all sharp corners and shall be given a bevel or draft in the case of all projections, such as girders and copings, to ensure easy removal.

Metal ties or anchorages within the forms shall be so constructed as to permit their removal, without injury to the concrete, to a depth of at least the reinforcing steel clearance shown on the plans. In case ordinary wire ties are permitted, all wires, upon removal of the forms, shall be cut back at least 1/4 inch from the face of the concrete with chisels or nippers. Nippers shall be used for green concrete. All fittings for metal ties shall be designed so that upon their removal the cavities which are left will be the smallest practicable size. The cavities shall be filled with cement mortar and the surface left sound, smooth, even, and uniform in color.

Forms shall be set and maintained to the lines designated until the concrete is sufficiently cured for form removal. Forms shall remain in place for periods which shall be determined as hereinafter specified. If forms are deemed to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer will order the work stopped until the defects have been corrected.

The shape, strength, rigidity, water-tightness, and surface smoothness of reused forms shall be maintained at all times. Warped or bulged lumber shall be resized before being reused. Forms which are unsatisfactory in any respect shall not be reused.

Access to the lower portions of forms for narrow walls and columns shall be provided for cleaning out extraneous material immediately before placing the concrete.

All forms shall be treated with an approved oil or saturated with water immediately before placing the concrete. For rail members or other members with exposed faces, the forms shall be treated only with an approved oil to prevent the adherence of concrete. Any material which will adhere to or discolor the concrete shall not be used.

When metal forms are used they shall be kept free from rust, grease, or other foreign matter which will discolor the concrete. They shall be of sufficient thickness and so connected that they will remain true to shape and line, and shall conform in all respects as herein prescribed for mortar

tightness, filleted corners, beveled projections, etc. They shall be constructed so as to ensure easy removal without injury to concrete. All inside bolt and rivet heads shall be countersunk.

All chamfer strips shall be dressed, straight, and of uniform width and shall be maintained as such at all times.

907-804.03.14.2--Stay-In-Place Metal Forms. Stay-in-place (SIP) metal forms are corrugated metal sheets permanently installed between the supporting superstructure members. After the concrete has cured, these forms shall remain in place as permanent, non-structural members of the bridge.

Pay quantities for deck concrete will be computed from the dimensions shown in the Contract Plans with no allowance for changes in deflection and /or changes in dimensions necessary to accommodate the SIP metal forms.

There will be no direct payment for the cost of the forms and form supports, or any material, tools, equipment, or labor incidental thereto, but the cost shall be considered absorbed in the contract unit price for concrete.

Before fabricating any material, three (3) complete sets of SIP metal form shop drawings and design calculations, bearing the Design Engineer's Seal, shall be submitted to the Director of Structures, State Bridge Engineer, through the Engineer, for review. The Contractor's SIP metal form Design Engineer shall be a MS Registered Professional Engineer who is knowledgeable in the field of structural design.

In no case shall additional dead load produced by the use of SIP metal forms overstress any bridge component. Design calculations shall indicate any additional dead load from SIP metal form self-weight, form support hangers, concrete in flutes, concrete due to form deflection, etc. not included in the Contract Plans. The additional dead loads shall be clearly labeled and tabulated on the shop drawings. Bridge Division will evaluate the additional load for overstress of the bridge components. In the event that the additional dead load produces an overstress in any bridge component, Bridge Division will reject the Contractor's design. Deflection and loads produced by deflection of the SIP metal forms shall be considered and indicated in the design calculations.

The cambers and deflections provided in the Contract Plans do not consider the effects of SIP metal forms. The Contractor's Engineer shall take into account the weight of the forms and any additional dead load when developing the "Bridge Superstructure Construction Plan".

For the purpose of reducing any additional dead load produced by the SIP metal forms, the flutes of SIP metal forms may be filled with polystyrene foam. When polystyrene foam is used to fill the forms, the form flutes shall be filled completely; no portion of the polystyrene foam shall extend beyond the limits of the flutes. The Contractor shall ensure that the polystyrene foam remains in its required position within flutes during the entire concrete placement process. The Contractor shall not use reinforcing steel supports or other accessories in such a manner as to cause damage to the polystyrene foam. All damaged polystyrene foam shall be replaced to the

satisfaction of the Engineer. All welding of formwork shall be completed prior to placement of polystyrene foam.

For bridges not located in horizontal curves, the Contractor may reduce the additional dead load by matching the flute spacing with the transverse steel spacing of the bottom layer. The bottom longitudinal layer of steel shall have one (1) inch of minimum concrete cover measured from the bottom of the reinforcing to the top of the flute. The Contractor will not be allowed to vary the reinforcing steel spacing or size from the Contract Plans for the purpose of matching flute spacing.

907-804.03.14.2.1--Materials. SIP metal forms and supports shall meet the requirements of ASTM Designation: A653 having a coating designation G165. Form materials that are less than 0.03-inch uncoated thickness shall not be allowed.

907-804.03.14.2.2--Certification. The Contractor shall provide written certification from the manufacturer stating the product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.3--Polystyrene Foam. The polystyrene foam shall be comprised of expanded polystyrene manufactured from virgin resin of sufficient density to support the weight of concrete without deformation. The polystyrene foam shall be extruded to match the geometry of the flutes and provide a snug fit. The polystyrene foam shall have a density of not less than 0.8 pounds per cubic foot. The polystyrene foam shall have water absorption of less than 2.6% when tested according to ASTM Designation: C272. The Contractor shall provide written certification from the manufacturer stating the polystyrene foam product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.4--Design. The design of the SIP metal forms shall meet the following criteria.

1. The maximum self-weight of the stay in place metal forms, plus the weight of the concrete or expanded polystyrene required to fill the form flutes (where used), shall not exceed 20 psf.
2. The forms shall be designed on the basis of dead load of form, reinforcement, and plastic concrete plus 50 pounds per square foot for construction loads. The design shall use a unit working stress in the steel sheet of not more than 0.725 of the specified minimum yield strength of the material furnished, but not to exceed 36,000 psi.
3. Deflection under the weight of the forms, reinforcement, and plastic concrete shall not exceed 1/180 of the form span or 1/2 inch, whichever is less, for form spans of 10 feet or less, or 1/240 of the form span or 3/4 inch, whichever is less, for form spans greater than 10 feet.
4. The design span of the form shall equal the clear span of the form plus two (2) inches. The span shall be measure parallel to the form flutes.

5. Physical design properties shall be computed in accordance with requirements of the AISI Specifications for the Design of Cold Formed Steel Structural Members, latest published edition.
6. The design concrete cover required by the plans shall be maintained for all reinforcement.
7. The plan dimensions of both layers of primary deck reinforcement from the top surface of the concrete deck shall be maintained.
8. The SIP metal form shall not be considered as lateral bracing for compression flanges of supporting structural members.
9. SIP metal forms shall not be used under closure pours or in bays where longitudinal slab construction joints are located. SIP metal forms shall not be used under cantilevered slabs such as the overhang outside of fascia members.
10. Forms shall be secured to the supporting members by means other than welding directly to the member. Welding to the top flanges of steel stringers and/or girders shall not be allowed. Alternate installation procedures shall be submitted addressing this condition.

907-804.03.14.2.5--Construction. SIP metal form sheets shall not rest directly on the top of the stringer or floor beam flanges. Sheets shall be fastened securely to form supports, and maintain a minimum bearing length of one (1) inch at each end for metal forms. Form supports shall be placed in direct contact with the flange of the stringer or floor beam. All attachments for coated metal forms shall be made by bolts, clips, screws, or other approved means.

907-804.03.14.2.6--Form Galvanizing Repairs. Where forms or their installation are unsatisfactory in the opinion of the Engineer, either before or during placement of the concrete, the Contractor shall correct the defects before proceeding with the construction work. The cost of such corrective work shall be at the sole expense of the Contractor. Minor heat discoloration in areas of welds shall not be touched up.

907-804.03.14.2.7--Concrete. The Contractor shall ensure concrete placement does not damage the SIP metal forms. Approved pouring sequences shall be used. The completed SIP metal form system shall be sufficiently tight to prevent leakage of mortar or concrete. The concrete shall be consolidated to avoid honeycomb and voids, especially at construction joints, expansion joints, valleys, and ends of form sheets. Calcium chloride or any other admixture containing chloride salts shall not be used in the concrete.

907-804.03.14.2.8--Inspection. The Engineer will observe the Contractor's method of construction during all phases of the construction of the bridge deck slab, including the installation of the SIP metal form system; location and fastening of the reinforcement; composition of concrete items; mixing procedures, concrete placement, and vibration; and finishing of the bridge deck. Should the Engineer determine that the procedures used during the placement of the concrete warrant inspection of the underside of the deck, at least one section of the metal forms shall be removed in each span for this purpose. This shall be done as soon after placing the concrete as

practical in order to provide visual evidence that the concrete mix and the procedures are obtaining the desired results. An additional section shall be removed in any span if the Engineer determines that there has been any change in the concrete mix or in the procedures warranting additional inspection.

If, in the Engineer's judgment, inspection is needed to check for defects in the bottom of the deck or to verify soundness, the SIP metal forms shall be sounded with a hammer after the deck concrete has been in place a minimum of two days. If sounding discloses areas of doubtful soundness to the Engineer, the SIP metal forms shall be removed from such areas for visual inspection after the concrete has attained adequate strength. The SIP metal bridge deck forms shall be removed at no expense to the State.

At locations where sections of the metal forms have been removed, the Engineer will not require the Contractor to replace the metal forms. The adjacent metal forms and supports shall be repaired to present a neat appearance and to ensure their satisfactory retention. As soon as the form is removed, the Engineer will examine the concrete surfaces for cavities, honeycombing, and other defects. If irregularities are found and the Engineer determines that these irregularities do not justify rejection of the work, the concrete shall be repaired as directed by the Engineer. If the Engineer determines that the concrete where the form is removed is unsatisfactory, additional metal forms as necessary shall be removed to inspect and repair the slab, and the Contractor's method of construction shall be modified as required to obtain satisfactory concrete in the slab. All unsatisfactory concrete shall be removed and replaced as directed at no expense to the State.

If the method of construction and the results of the inspections as outlined above indicate that sound concrete has been obtained throughout the slabs, the amount of sounding and form removal may be reduced when approved by the Engineer.

The Contractor shall provide a safe and convenient means of conducting of the inspection.

907-804.03.15--Removal of Falsework, Forms, and Housing. In the determination of the time for the removal of falsework, forms, and housing and the discontinuance of heating, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete, and the materials used in the mix. No forms or supports shall be removed prior to approval by the Engineer. During cold weather, removal of housing and the discontinuance of heating shall be in accordance with Subsection 907-804.03.16.1.

Concrete in the last pour of a continuous superstructure shall have attained a compressive strength of 2,400 psi, as determined by cylinder tests or maturity meter probe, prior to striking any falsework. It is important that falsework be removed as evenly as possible to prevent excessive deflection stresses in the spans.

At the Contractor's option and with the approval of the Engineer, the time for removal of forms may be determined by cylinder tests, in accordance with the requirements listed in Table 6, in which case the Contractor shall furnish facilities for testing the cylinders. The facilities shall include an approved concrete testing machine of sufficient capacity and calibrated by an acceptable commercial laboratory. Tests shall be conducted in the presence of a Department representative

to witness and record strengths obtained on each break or performed by a Department certified technician in an approved testing laboratory.

[a1]The cylinders shall be cured under conditions which are not more favorable than those existing for the portions of the structure which they represent.

Table 6
Minimum Compressive Strength Requirements for Form Removal

Forms:

Columns	1000 psi
Side of Beams	1000 psi
Walls not under pressure	1000 psi
Floor Slabs, overhead	2000 psi
Floor Slabs, between beams	2000 psi
Slab Spans	2400 psi
Other Parts	1000 psi

Centering:

Under Beams	2400 psi
Under Bent Caps	2000 psi

Limitation for Placing Beams on:

Pile Bents, pile under beam	2000 psi
Frame Bents, two or more columns	2200 psi
Frame Bents, single column	2400 psi

For bridges, non-SIP metal forms for bridge deck slabs overhead and bridge deck slabs between beams shall be removed with the approval of the Engineer, between two weeks and four weeks after the removal of the wet burlap applied in accordance with Subsection 907-804.03.17.1, or application of liquid membrane applied in accordance with Subsection 907-804.03.17.2.

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. Falsework, forms, and housings may be removed when maturity meter readings indicate that the required concrete strength is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

Table 7
Requirements for use of Maturity Meter Probes

Structure Component	Quantity of Concrete	No. of Probes
Slabs, beams, walls, & miscellaneous items	0 - 30 yd ³	2
	> 30 to 60 yd ³	3
	> 60 to 90 yd ³	4
	> 90 yd ³	5
Footings, Columns & Caps	0 - 13 yd ³	2
	> 13 yd ³	3
Pavement, Pavement Overlays	1200 yd ²	2
Pavement Repairs	Per repair or 900 yd ² Whichever is smaller	2

Methods of form removal likely to cause overstressing of the concrete shall not be used. Forms and supports shall be removed in a manner that will permit the concrete to uniformly and gradually take the stresses due to its own weight. Centers shall be gradually and uniformly lowered in a manner that will avoid injurious stresses in any part of the structure.

As soon as concrete for railings, ornamental work, parapets and vertical faces which require a rubbed finish has attained a safe strength, the forms shall be carefully removed without marring the surfaces and corners, the required finishing performed, and the required curing continued.

Prior to final inspection of the work, the Contractor shall remove all falsework, forms, excavated material or other material placed in the stream channel during construction. Falsework piles may be cut or broken off at least one foot below the mudline or ground line unless the plans specifically indicate that they are to be pulled and completely removed from the channel.

907-804.03.16--Cold or Hot Weather Concreting.

907-804.03.16.1--Cold Weather Concreting. In cold weather, the temperature of the concrete when delivered to the job site shall conform to the temperature limitations of "Temperature Limitations on Concrete when Delivered to Job Site" listed in Table 8 below. Cold weather is defined as three consecutive days when there is a probability that the daily average of the highest and lowest ambient temperatures is expected to be less than 40°F. This three-day forecast shall be based on the latest information available from the National Weather Service.

When the Contractor proposes to place concrete during seasons when there is a probability of ambient temperatures lower than 40°F, the Contractor shall have available on the project the approved facilities necessary to enclose uncured concrete and to keep the temperature of the air inside the enclosure within the ranges and for the minimum periods specified herein.

When there are indications of temperatures of less than 40°F during the first four days after placement of the concrete, the concrete shall be protected from cold temperatures by maintaining a temperature between 50°F and 100°F for at least four days after placement and between 40°F and 100°F for at least three additional days. The Contractor shall use such heating equipment such as stoves, salamanders, or steam equipment as deemed necessary to protect the concrete. When dry heat is used, means of maintaining atmospheric moisture shall be provided.

At the option of the Contractor with the approval of the Engineer, when concrete is placed during cold weather and there is a probability of ambient temperatures lower than 40°F, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. An approved insulating blanketing material shall be used to protect the work when ambient temperatures are less than 40°F and shall remain in place until the required concrete strength in Table 6 is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

One or more of the aggregates and/or mixing water may be heated. The aggregates may be heated by steam, dry heat, or by placing in the mixing water which has been heated. Frozen aggregates shall not be used. When either aggregates or water are heated above 100°F, the aggregates and water shall be combined first in the mixer before the cement is added to avoid flash set. Cement shall not be mixed with water or with a mixture of water and aggregate having a temperature greater than 100°F.

The use of salt or other chemical admixtures in lieu of heating will not be permitted.

Before placing concrete, all ice or frost shall be removed from the forms and reinforcement.

In the case of concrete placed directly on or in the ground, such as for footings or bottom slabs, protection and curing during cold weather may be provided as set for concrete pavement under Subsection 501.03.20.3.

The Contractor shall assume all risk and added cost connected with the placing and protecting of concrete during cold weather. Permission given by the Engineer to place concrete during such time will in no way relieve the Contractor of responsibility for satisfactory results. Should it be determined at any time that the concrete placed under such conditions is unsatisfactory, it shall be removed and replaced with satisfactory concrete by the Contractor without extra compensation.

TABLE 8
COLD WEATHER TEMPERATURE LIMITATIONS ON CONCRETE WHEN
DELIVERED TO JOB SITE

Section thickness in the least dimension inches	Jobsite Acceptance Temperature Range °F
Less than 12	55 to 75
12 to 36	50 to 70
36 to 72	45 to 65
Greater than 72	40 to 60

907-804.03.16.2--Hot Weather Concreting. The manufacture, placement, and protection of concrete during hot weather requires special attention to ensure that uniform slump ranges and satisfactory placement qualities are maintained, that surface cracking is held to a minimum, and that design strengths are produced.

When the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods.

When the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

907-804.03.17--Curing Concrete. Curing is defined as all actions taken to ensure the moisture and temperature conditions of freshly placed concrete exist so the concrete may develop its potential properties. Curing shall take place from the time of placement until its potential properties have developed. The Contractor shall use the guidance in ACI 308R-01 to:

- a) cure the concrete in such a manner as to prevent premature moisture loss from the concrete,
- b) supply additional moisture to the concrete as required in order to ensure sufficient moisture within the concrete, and
- c) maintain a concrete temperature beneficial to the concrete.

Curing in accordance with the requirements in either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall be completely established within 20 minutes after finishing, except as noted for bridge decks. Finishing is complete when the pan drag, burlap drag, or other finishing method is complete.

When stay-in-place (SIP) metal forms are used in accordance with Subsection 907-804.03.14.2 in conjunction with the Transverse Method in accordance with Subsection 804.03.19.7.3, if the concrete mixture contains lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 and an internal curing water content of 8.0 pounds or greater per 100 pounds of total cementitious materials, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2. The minimum amount of LWA shall be established following the information in the Department's *Concrete Field Manual*, Paragraph 5.5.5. If the concrete mixture does not meet or exceed this internal curing water content, curing shall be accomplished in accordance with Subsection 907-804.03.17.1.

When SIP metal forms are not used or used in conjunction with the Longitudinal Method in accordance with Subsection 804.03.19.7.2, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2.

The length of time for curing shall be maintained in accordance with either of the following:

- 1. Prescribed Length of Time:**

- a) Curing following the requirements of Subsection 907-804.03.17.1 shall continue uninterrupted for at least 14 days.
- b) Curing following the requirements of Subsection 907-804.03.17.2 shall continue uninterrupted for at least 10 days.

OR

2. Length of Time Defined by Development of Compressive Strength:

Curing following the application requirements of Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall continue uninterrupted for each day's production until the compressive strength of the concrete exceeds 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Therefore, if an area is being cured in accordance with Subsection 907-804.03.17.1, the curing by wet burlap shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Likewise, if an area is being cured in accordance with Subsection 907-804.03.17.2, the curing by liquid membrane shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1.

The compressive strength of the concrete may be determined by the use of maturity meter in accordance with Subsection 907-804.03.15.

907-804.03.17.1--Water With Waterproof Cover. All burlap shall be completely saturated and wet prior to placing it on the concrete. The burlap shall have been fully soaked in water for a minimum of 12 hours prior to placement on the concrete.

For bridge decks, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of the initial strike-off for bridges without a skew and 25 minutes of the initial strike-off for bridges with a skew. For all other concrete, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of completing finishing.

For bridge decks, following the first layer of burlap, the Contractor shall apply a second layer of saturated burlap within five (5) minutes of applying the first layer.

The applied burlap shall completely cover all exposed concrete surfaces. In areas where the burlap may not be directly applied due to the concrete surface, for example, in areas where reinforcing steel protrudes thru the concrete surface, like in the areas of a bridge deck where the bridge railing will be constructed at a later time, the saturated burlap shall be draped over the steel. The concrete surface shall not be allowed to dry after strike-off or at any time during the curing period.

The Contractor shall maintain the burlap in a fully wet condition using powered fogging equipment capable of producing a fog spray of atomized droplets of water until the concrete has gained sufficient strength to allow foot traffic without the foot traffic marring the surface of the concrete. Burlap shall not be maintained in the fully wet condition using equipment which does not produce a fog spray of atomized droplets of water or by use of manually pressurized sprayers.

For bridge decks, once the concrete has gained sufficient strength to allow foot traffic which does not mar the surface of the concrete, soaker hoses shall be placed on the burlap. The soaker hoses shall then be supplied with running water continuously to maintain continuous saturation of all burlap and the entire concrete surface.

If there is a delay in the placement of the first layer of saturated burlap outside the time limit, the struck-off and finished concrete shall be kept wet by use of the powered fogging equipment used to keep the burlap wet.

White polyethylene sheets shall be placed on top of the wet burlap and, as applicable, soaker hoses, covering the entire concrete surface as soon as practical and not more than 12 hours after the placement of the concrete. White polyethylene sheets of the widest practical width shall be used, overlapping adjacent sheets a minimum of six inches (6") and tightly sealed with an adhesive like pressure sensitive tape, mastic, glue, or other approved methods to form a complete waterproof cover of the entire concrete surface. White polyethylene sheets which overlap a minimum of two feet (2') may be held in place using means other than an adhesive. The white polyethylene sheets shall be secured so that wind will not displace them. The Contractor shall immediately repair the broken or damaged portions or replace sections that have lost their waterproof qualities.

If burlap and/or white polyethylene sheets are temporarily removed for any reason during the curing period, the Contractor shall keep the entire exposed area continuously wet. The saturated burlap and white polyethylene sheets shall be replaced, resuming the specified curing conditions, as soon as possible.

The Contractor shall inspect the bridge deck surface once every eight (8) hours for the entirety of the curing period, so that all areas remain wet for the entire curing period and all curing requirements are satisfied and document the inspection in accordance with Subsection 907-804.03.17.1.1.

At the end of the curing period, one coating of liquid membrane shall be applied following the requirements of Subsection 907-804.03.17.1.2. The purpose of the coating of liquid membrane is to allow for slow drying of the concrete. The application of liquid membrane to any area shall be complete within 30 minutes of the beginning of removal of the white polyethylene sheets, soaker hoses, and burlap from this area.

907-804.03.17.1.1--Documentation for Bridge Decks. The Contractor shall provide the Engineer with a daily inspection report that includes:

- documentation that identifies any deficiencies found (including location of deficiency);
- documentation of corrective measures taken;
- a statement of certification that all areas are wet and all curing material is in place on the entire bridge deck;
- documentation showing the time and date of all inspections and the inspector's signature;
- documentation of any temporary removal of curing materials including location, date and time, length of time curing was removed, and means taken to ensure exposed area was kept continuously wet.

907-804.03.17.1.2--Liquid Membrane. At the end of the 14-day wet curing period the wet burlap and polyethylene sheets shall be removed and within 30 minutes, the Contractor shall apply white liquid membrane to the deck. The liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The application of liquid membrane shall be accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first application of liquid membrane.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The coating shall be protected against marring for at least seven (7) days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

The 7-day period during which the liquid membrane is applied and protected shall not be reduced even if the period of wet curing is extended past the required 14 days.

907-804.03.17.1.2.1--Liquid Membrane Documentation. The Contractor shall make available to the Engineer an application rate verification method and any information necessary during application of the liquid membrane to verify that the rate of application meets the prescribed rate for the various surfaces of the concrete, including, but not limited to, the top surface of the bridge deck and exposed sides of the bridge deck after any forms are removed. The Contractor shall submit this application verification method to the Engineer in accordance with Subsection 907-804.02.12.1.1.

One method of verifying the rate of application is as follows:

1. Determine the volume of liquid membrane in the container. For a container with a uniform cross-sectional area, for example a 55-gallon drum, determine the area of the cross-section. Determine the height of the surface of the liquid membrane from the bottom of the container. This may be accomplished by inserting a sufficiently long, clean dip-stick parallel with the axis of the container into the liquid membrane until the inserted end of the dip-stick contacts the bottom of the container. On removing the dip-stick, measure the length from the end which was inserted to the point on the dip-stick where the liquid membrane ceases to coat the dip-stick. Multiply the area of the cross-section by the height of the level of liquid membrane, maintaining consistent units, to determine the volume.
2. Perform step 1 prior to beginning applying the liquid membrane to establish the initial volume.
3. During the period of application, perform step 1 each 100 square feet of bridge deck.
4. In order to meet the required application rate of one (1) gallon per 200 square feet, the amount in the container shall be at least 0.5 gallon less than the previous volume in the previous 100 square feet. Other changes in volume may apply depending on the manufacturer's recommended application rate.
5. Additional applications to an area shall be applied until the required rate is satisfied. Areas which are not visually satisfactory to the Engineer shall have additional liquid membrane applied as directed by the Engineer.

The amount of liquid membrane applied shall be determined each day using the application verification method. This information shall be submitted to the Engineer within 24 hours of applying the liquid membrane.

907-804.03.17.2--Liquid Membrane Method. All surfaces on which curing is to be by liquid membrane shall be given the required surface finish prior to the application of liquid membrane. Concrete surfaces cured by liquid membrane shall receive two applications of white liquid membrane. Neither application shall be made from a position supported by or in contact with the freshly placed concrete. Both applications shall be applied perpendicularly to the surface of the concrete.

When using liquid membrane, the liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The application of liquid membrane shall be accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first two applications of liquid membrane.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The first application of the liquid membrane shall be made as the work progresses. For bridge decks, the first application shall be completed in each area of the deck, including the area in which the bridge railing will be later constructed, within 20 minutes of initial strike-off for bridges with no skew and within 25 minutes of initial strike-off for bridges with skew. For all other concrete, the first application of the liquid membrane shall be completed within 20 minutes of finishing.

The second application shall be applied within 30 minutes after the first application. The liquid membrane shall be uniformly applied to all exposed concrete surfaces.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The Contractor shall make available to the Engineer an application rate verification in accordance with Subsection 907-804.03.17.1.2.1.

The coating shall be protected against marring for at least 10 days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

After the specified time for curing, but prior to constructing the bridge railing, all liquid membrane shall be removed from both the exposed surfaces of the reinforcing steel and the concrete surfaces on which bridge rail will be constructed. This removal of liquid membrane may be accomplished by high pressure washing or other methods approved by the Engineer.

907-804.03.18--Expansion and Fixed Joints, Bearings, Anchor Bolts, Plates, Castings, Pipes, Drains, Conduits, Etc. All joints shall be constructed according to details shown on the plans. The edges of the concrete at open or filled joints shall be chamfered or edged as indicated on the plans.

907-804.03.18.1--Open Joints. Open joints shall be placed in the locations shown on the plans and shall be constructed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material. The insertion and removal of the template shall be accomplished without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint unless so specified on the plans.

907-804.03.18.2--Filled Joints. Poured expansion joints and joints to be sealed with premolded materials shall be constructed similar to open joints. When premolded types are specified, the filler shall be placed in correct position as the concrete on one side of the joint is placed. When

the form is removed, the concrete on the other side shall be placed. Adequate water stops of metal, rubber, or plastic shall be carefully placed as shown on the plans.

907-804.03.18.3--Premolded and Preformed Joint Seals. When preformed elastomeric compressive joint seals are specified, the previously formed and cured open joint shall be thoroughly cleaned of all foreign matter, the required adhesive uniformly applied, and the seal installed in accordance with the recommendations of the manufacturer of the seal.

When premolded filler is used for the joints in the roadway slab, the tops shall be adequately sealed with poured joint filler in accordance with details on the plans. Premolded filler shall be permanently fastened to an adjacent concrete surface by appropriate use of copper wire, copper nails, or galvanized nails.

907-804.03.18.4--Steel Joints. The plates, angles, or other structural shapes shall be accurately shaped at the shop to conform to the section of the concrete floor. Fabrication and painting shall conform to the specifications covering those items. When called for on the plans or in the special provisions, the material shall be galvanized in lieu of painting. Care shall be taken to ensure that the surface in the finished plane is true and free of warping. Positive methods shall be employed in placing the joints to keep them in correct position during the placing of the concrete. The opening at expansion joints shall be that designated on the plans at normal temperature, and care shall be taken to avoid impairment of the clearance in any manner.

907-804.03.18.5--Water Stops. Adequate water stops of metal, rubber, or plastic shall be placed as shown on the plans. Where movement at the joint is provided for, the water stops shall be of a type permitting movement without injury. They shall be spliced, welded, or soldered to form continuous watertight joints.

907-804.03.18.6--Bearing Devices. Bearing plates, rockers, and other bearing devices shall be constructed according to details shown on the plans. Unless otherwise specified or set in plastic concrete, they shall be set in grout to insure uniform bearing. Structural steel and painting shall conform to the requirements of Sections 810 and 814. When specified, the material shall be galvanized in lieu of painting. The rockers or other expansion bearing devices shall be set, considering the temperature at the time of erection, so that the required position of the device is provided.

At all points of bearing contact, concrete members shall be separated from underlying members by dimensioned bearing pads or by methods and/or materials specified on the plans.

When not otherwise specifically provided, contact areas between concrete super-structures and substructures shall be separated by three layers of No. 15, Type I, roofing felt.

907-804.03.18.7--Friction Joints. Metal friction joints shall consist of plates as indicated on the plans and shall be securely anchored in correct position. All sliding surfaces shall be thoroughly coated with an approved graphite grease. Movement shall not be impeded by the concrete in which the plates are embedded.

907-804.03.18.8--Placing Anchor Bolts, Plates, Castings, Grillage, Conduits, Etc. All anchor bolts, plates, castings, grillage, conduits, etc. indicated on the plans to be placed in or on the concrete shall be placed, set, or embedded as indicated or as directed. These items of the construction shall be set in portland cement mortar as referenced in Subsection 714.11.5, except that anchor bolts may, as permitted by the Engineer, be built into the masonry, set in drilled holes, or placed as the concrete is being constructed by inserting encasing pipe or oiled wooden forms of sufficient size to allow for adjustment of the bolts. After removal of the pipe or forms, the space around the bolts shall be filled with portland cement mortar completely filling the holes. The bolt shall be set accurately and perpendicular to the plane of the seat.

Anchor bolts which are to be set in the masonry prior to the erection of the superstructure shall be carefully set to proper location and elevation with a template or by other suitable means.

When bed plates are set in mortar, no superstructure or other load shall be placed thereon until this mortar has been allowed to set for a period of at least 96 hours, subject to the restrictions for cold weather concreting in Subsection 907-804.03.16.1. The mortar shall be kept well moistened during this period.

Weep hole drains shall be installed in abutments and retaining walls, and roadway drains or scuppers shall be installed in the roadway slabs in accordance with the details shown on the plans.

Where backfill is to be made at weep holes or openings in the structure, sand or stone chimneys or French drains shall be constructed as specified and shall extend through the portion of the backfill to be drained. Except as otherwise provided, the sand, stone, or slag used in this construction shall meet the requirements of Subsection 704.04.

907-804.03.19--Finishing Concrete Surfaces.

804.03.19.1--Classes of Finishes. Surface finishes of exposed concrete surfaces shall be classified as follows:

- Class 1 - Ordinary Surface Finish
- Class 2 - Rubbed or spray Finish
- Class 3 - Tooled Finish
- Class 4 - Sand-Blast Finish
- Class 5 - Wirebrush or Scrubbed Finish
- Class 6 - Floated Surface Finish

907-804.03.19.2--Class 1, Ordinary Surface Finish. Immediately following the removal of forms, all fins and irregular projections shall be removed from all surfaces except from those which are not to be exposed or not to be waterproofed. On all surfaces, the cavities produced by form ties and all other holes, honeycomb spots, broken corners or edges, and other defects shall be thoroughly cleaned, and after having been kept saturated with water for at least three hours shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportions used in the class of the concrete being finished. Mortar used in pointing shall be not more than one hour old. The mortar patches shall be cured as specified under Subsection 907-804.03.17. All

construction and expansion joints shall be left carefully tooled and free of mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges.

The resulting surfaces shall be true and uniform. All surfaces which cannot be repaired to the satisfaction of the Engineer shall be given a Class 2 rubbed finish.

907-804.03.19.3--Class 2, Rubbed or Spray Finish.

907-804.03.19.3.1--Rubbed Finish. After removal of forms, the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as its condition will permit. Immediately before starting this work, the concrete shall be kept thoroughly saturated with water for at least three hours. Surfaces shall be rubbed with a medium course Carborundum stone using a small amount of mortar on its face. The mortar shall be composed of cement and sand mixed in the proportions used in the concrete being finished. Rubbing shall be continued until all form marks, projections, and irregularities have been removed, all voids are filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this time.

After all concrete above the surface being treated has been cast, the final finish shall be obtained by rubbing with a fine Carborundum stone and water. This rubbing shall continue until the entire surface is of a smooth texture and uniform color.

After the final rubbing is completed and the surface has dried, it shall be rubbed with burlap to remove loose powder and objectionable marks.

907-804.03.19.3.2--Spray Finish. Prior to the spray finish, the concrete shall be given a Class 1 finish in accordance with Subsection 907-804.03.19.2, supplemented if necessary with a grout meeting the requirements of Subsection 714.11 with fine aggregate modified to require 100 percent passing the No. 16 Sieve.

Grout shall be applied with burlap pads or float sponges, and as soon as the grout has dried the surface shall be brushed to remove all loose grout and the surface left smooth and free of air holes. Surfaces to be sprayed shall be free of efflorescence, flaking coatings, dirt, oil, and other foreign substances. Prior to application of the spray finish, the surfaces shall be free of moisture, as determined by sight and touch, and in a condition consistent with the manufacturer's published recommendations.

The spray finish material shall meet the requirements of Subsection 714.12 and shall be listed on of Approved Sources of Materials. The spray finish shall be applied with heavy duty spray equipment capable of maintaining a constant pressure as necessary for proper application. The material shall be applied as recommended by the manufacturer except the rate of application shall not be less than one gallon per 50 square feet of surface area without prior written approval of the Engineer.

The completed finish shall be tightly bonded to the structure and present a uniform appearance and texture equal to or better than a rubbed finish. If necessary, additional coats shall be sprayed to produce the desired surface texture and uniformity. Upon failure to adhere positively to the

structure without chipping or cracking or to attain the desired surface appearance, the coatings shall be completely removed and the surface given a rubbed finish in accordance with 907-804.03.19.3.1, or other approved methods shall be used to obtain the desired surface finish to the satisfaction of the Engineer without additional cost to the State.

907-804.03.19.4--Classes 3, 4, and 5 Finishes. If required, specifications for these finishes will be contained in the special provisions.

907-804.03.19.5--Class 6, Floated Surface Finish. After the concrete has been deposited in place, it shall be consolidated and the surface shall be struck off by means of a strike board and floated with a wooden or cork float. An edging tool shall be used on edges and expansion joints. The surface shall not vary more than 1/8 inch under a 10-foot straightedge. The surface shall have a granular or matte texture which will not be slick when wet.

907-804.03.19.6--Required Finishes for Various Surfaces.

907-804.03.19.6.1--General. Unless otherwise specified, the top surface of sidewalks, the top horizontal surfaces of footings, and top slabs of box bridges, box culverts, or other structures shall be given a Class 6 finish. All formed concrete surfaces shall be given a Class 1 finish, except on surfaces which are completely enclosed, such as the inside surfaces of cells of box girders, the removal of fins and form marks and the rubbing of mortared surfaces to a uniform color will not be required.

In reference to finishing, exposed surfaces are surfaces or faces which may be seen after all backfill has been placed. Exposed surfaces requiring a Class 2 finish shall be finished at least one foot below the ground line or the low water elevation, whichever is higher.

The Class 2 finish shall be made upon a Class 1 finish. After the removal of forms the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as the condition of the concrete will permit.

Bridge floors shall be finished in accordance with Subsection 907-804.03.19.7.

907-804.03.19.6.2--Finishing Formed Concrete Surfaces of Box Bridges, Box Culverts, Pipe Headwalls, and Minor Structures. The exposed surfaces of wing walls and parapets of box bridges and box culverts to be used as vehicular or pedestrian underpasses shall be given a Class 2 finish. Exposed surfaces of other box culverts or box bridges, pipe culvert headwalls, and other minor structures shall be given a Class 1 finish unless otherwise indicated on the plans.

The exposed surfaces of retaining walls including copings and parapets shall receive a Class 2 finish.

907-804.03.19.6.3--Finishing Formed Concrete Surface of Bridges. All formed concrete bridge surfaces which are exposed shall have a Class 1 or 2 finish as set forth herein unless designated otherwise on the plans.

Bridges with designated surfaces for Class 2 finish are classified as follows:

- Group A - Bridges over highways, roads and streets.
- Group B - Bridges over waterways and railroads.
- Group BB - Twin or adjacent bridges of Group B category.

When a Group B or BB bridge also spans a highway, road or street, exposed concrete surfaces shall be finished in accordance with Group A requirements.

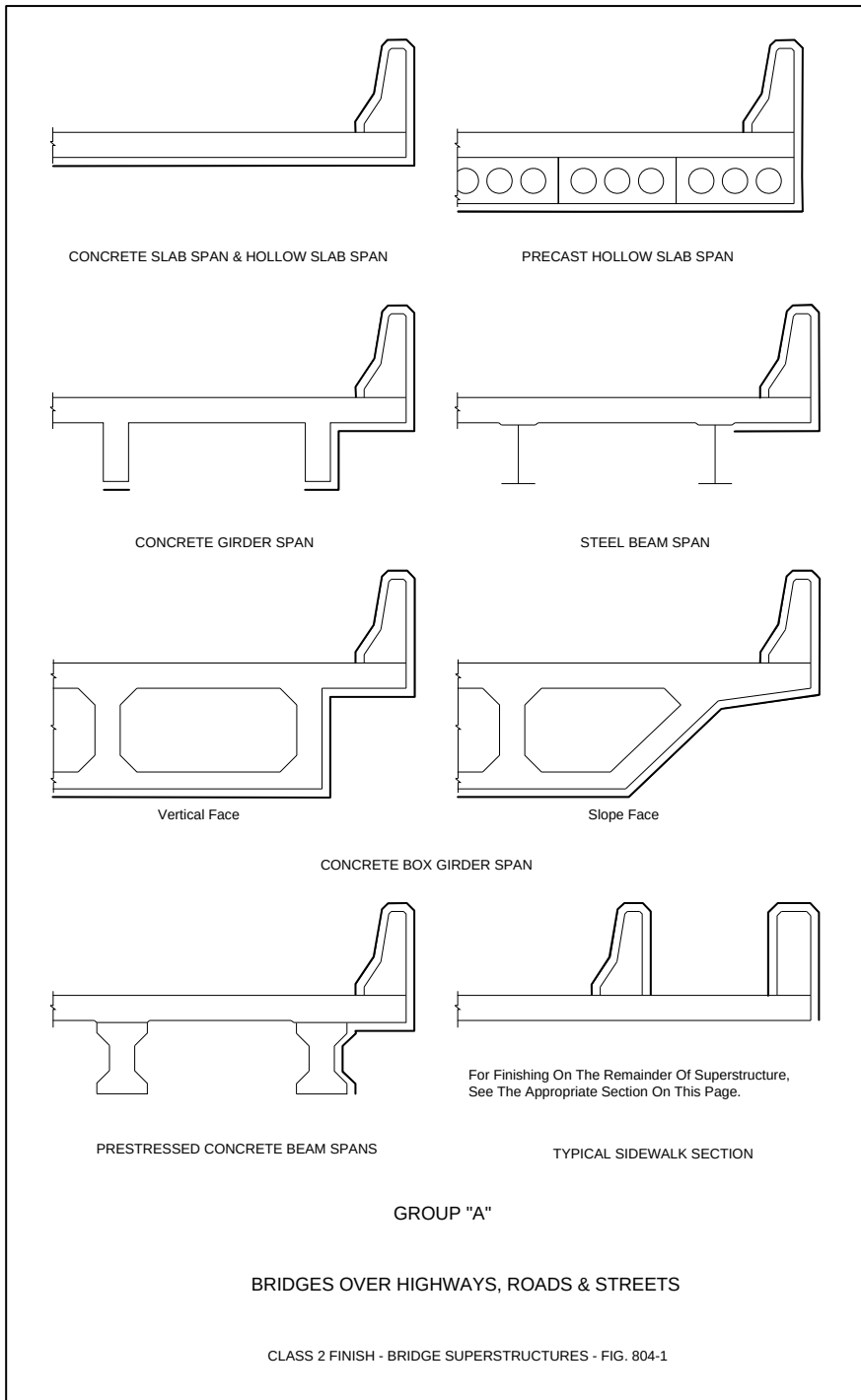
(A) Superstructures. Concrete surfaces to be given a Class 2 finish shall be the exposed surfaces of wings and rails and other exposed surfaces indicated by a double line in Figures 804-1, 804-2, and 804-3.

When a Group B or BB also spans a highway, road or street, the superstructure of spans over and extending one span in each direction beyond the lower level highway, road or street shall be given a Class 2 finish as shown for Group A.

(B) Substructures. Concrete surfaces to be given a Class 2 finish are as follows:

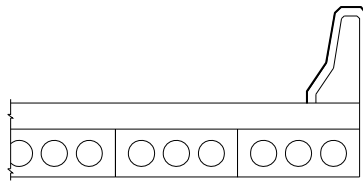
Group A. Exposed surfaces of abutments, end bents, end bent posts, wing walls, railing, retaining walls, parapets, copings, piers, columns, piles, caps, struts or walls between columns or piles, encasement of steel piles, arch rings and spandrel walls.

Group B and BB. Exposed surfaces of abutments, wing walls, end bent posts, railing, retaining walls, parapets and copings.

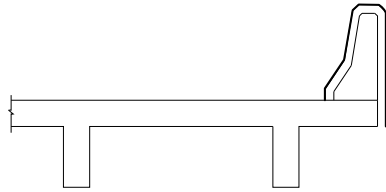




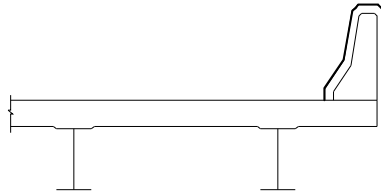
CONCRETE SLAB SPAN & HOLLOW SLAB SPAN



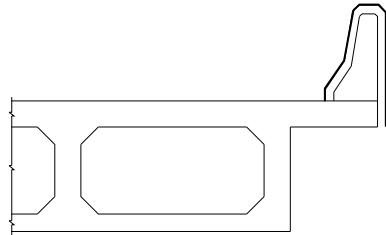
PRECAST HOLLOW SLAB SPAN



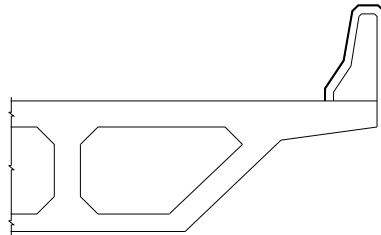
CONCRETE GIRDER SPAN



STEEL BEAM SPAN

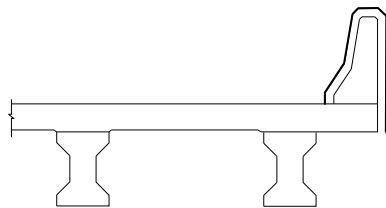


Vertical Face

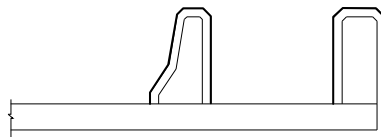


Slope Face

CONCRETE BOX GIRDER SPAN



PRESTRESSED CONCRETE BEAM SPANS

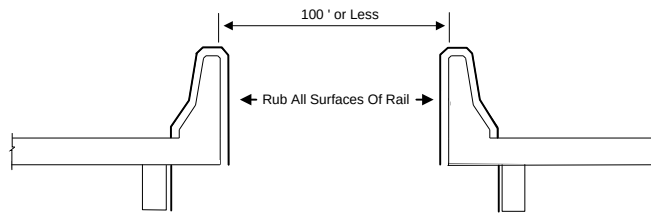


For Finishing On The Remainder Of Superstructure,
See The Appropriate Section On This Page.

TYPICAL SIDEWALK SECTION

GROUP "B"

BRIDGES OVER WATERWAYS AND BRIDGES OVER RAILROAD TRACKS



GROUP "B B" - ADJACENT BRIDGES

GROUP "B B"

TWIN or DUAL BRIDGES

CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-3

907-804.03.19.7--Finishing Bridge Decks.

907-804.03.19.7.1--General. Concrete bridge decks shall be struck off and finished by the method(s) designated on the plans.

In the event a method is not designated, the Contractor may use either the longitudinal or transverse method subject to the requirements contained in these specifications.

Except when indicated otherwise on the plans, the finish of the bridge deck shall be either a belt finish, a broom finish, or one of the following drag methods: pan, double pan, burlap, or pan and burlap. Manual finishing of the bridge deck shall be performed only in areas inaccessible by the finishing equipment mounted to the strike-off screed, but shall not hinder the requirements for curing in accordance with Subsection 907-804.03.17.1. The surface texture specified and surface requirements shall be in accordance with the applicable requirements of Subsections 501.03.17 and 501.03.18 modified only as the Engineer deems necessary for bridge deck construction operations.

At no time shall water on the surface of the concrete from bleeding, fogging, curing, or other sources be worked into the concrete or used as an aid for finishing.

Regardless of the method of finishing selected, requirements for curing per Subsection 907-804.03.17 shall be completed within the specified time limits. If the requirements in Subsection 907-804.03.17 are not completed within the specific time limits, the Contractor shall cease operations, revise his operations up to and including acquiring new or additional equipment or additional personnel in order to satisfy the requirements in Subsection 907-804.03.17, and, on approval from the Engineer, resume operations

907-804.03.19.7.2--Longitudinal Method. The longitudinal method may be used for repairs to bridge decks or bridge widening projects. For bridge widening projects, curing in accordance with Subsections 907-804.03.17 shall be completed within 30 minutes of initial strike-off for bridges without skew and within 35 minutes of initial strike-off for bridges with skew.

The longitudinal method requires that the strike-off screed be supported on accurately graded and supported bulkheads or templates placed across the full width at the end(s) of the pour. Before the concrete is placed, approved fixed templates or wooden bulkheads of not less than 1¼-inch lumber shall be placed perpendicular to the centerline of the roadway, or in the case of skew bridges at the angle of skew. At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed to assure the specified clearance to the reinforcing steel. The upper surface of the template or bulkheads shall be accurately set to conform to the required grade and crown.

Special attention shall be given to the gutter lines where the strike-off screed cannot reach. The gutters shall be finished by hand and tested with the straight edge. Floor drains shall be set lower than the finished gutter line and finished over. After initial set, the concrete shall be dished out and finished around the drains to form an outlet.

After the concrete has been deposited and rough graded, it shall be struck off by means of a strike-off screed resting on the bulkheads or fixed templates. The strike-off screed shall be of a type satisfactory to the Engineer and shall have sufficient strength to retain its shape under all working conditions. The final surface shall comply with the applicable requirements of Subsections 501.03.17.6 and 501.03.18, and unless otherwise specified in the contract, the final finish under this method shall be the belt finish.

In general, the overall strike-off screed should be trussed, with bracing heavy enough to support the weight of a man without deflecting, and should be adjustable for camber and correction of sag.

The strike-off screed will ride on the bulkheads or fixed templates at the ends of the section being finished. Care shall be taken to see that the bulkhead or fixed template elevations are accurately set since the entire span surface will be controlled by them. The manipulation of the screed shall be such that neither end is raised from the bulkheads or templates during the process.

The concrete shall be struck off by beginning at one curb and proceeding entirely across the span. A slight excess of concrete shall be kept in front of the cutting edge at all times. This operation shall be repeated at least three times. In each case, the strike-off screed shall be picked up and carried back to the point of beginning. No backward strokes will be allowed. The strike-off screed shall be moved along the bulkheads or fixed templates with a combined longitudinal and transverse motion. This operation may be manual or mechanical. Standing or walking in the fresh concrete ahead of the strike-off screed will not be permitted.

907-804.03.19.7.3--Transverse Method. The transverse method requires that the screeding equipment be supported on accurately graded and supported rails placed beyond the gutter lines and parallel with the centerline of the bridge.

The machine shall be so constructed and operated as to produce a bridge deck of uniform density with minimum manipulation of the fresh concrete and achieved in the shortest possible time. Manual transverse methods of screeding will not be permitted.

The finishing machine shall be supported on vertically adjustable rails set a sufficient distance from the gutter line to allow free movement of the screed from gutter line to gutter line. Satisfactory means of load distribution with minimum rail deflection shall be provided. The screed rails for a deck pour shall be completely in place for the full length of the pour and shall be firmly secured prior to placing concrete. The screed rails shall be adjusted as necessary to compensate for settlement and deflection occurring during the screeding operations. Supports for the screed rail shall be located directly over slab overhang support brackets as referenced in Subsection 907-804.03.14.1.

At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed carriage to assure the specified clearance to the reinforcing steel.

The screed shall be equipped with a metal cutting edge or other approved mechanical means for accurately fine grading the plastic concrete to the required grade and surface smoothness and shall be supported by a bridging structure sufficiently rigid and heavy to perform operations

satisfactorily on concrete of minimum slump without vibration, distortion, and wrecking of forms. The screed shall be mechanically actuated to deliver the screeding action and for travel in a longitudinal direction at a uniform rate along the bridge deck.

The screed shall complete sufficient passes to strike off all of the excess concrete with ample mortar along the entire leading edge to assure filling of low spots. Care shall be taken to remove all objectionable material from the gutters where final hand finishing will be required.

The selection of the transverse method may require the Contractor to furnish bridge deck concrete which contains an approved water-reducing set-retarding admixture in the quantities approved by the Engineer at no additional cost to the State. See Subsection 713.02 for more information.

Other finishing requirements shall be in accordance with the general requirements in Subsection 907-804.03.19.7.1 and as specified on the plans.

907-804.03.19.7.4--Acceptance Procedure for Bridge Deck Smoothness. After the bridge decks and bridge end slabs are completed and preferably before the construction of the bridge railing, they shall be tested for ride quality using a Contractor furnished profilograph. Profile Index Values shall be determined in accordance with Department SOPs and these specifications. The profilograph shall meet the requirements of Subsection 907-804.03.19.7.5. Profiles will be obtained in the wheel paths of the main thru lanes and, where conditions allow, in the wheel paths of any auxiliary lanes or tapers. Profile Index Values for bridge decks and bridge end slabs shall be obtained for all state roads with four lanes or more, on state roads three lanes or less where the current traffic count is 2000 ADT or higher, or as designated on the plans. Ride quality tests will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge end slab as possible and shall proceed forward across the remainder of the bridge end slab, across the bridge deck and continue across the next bridge end slab to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge end slab. Bridges and bridge end slabs not requiring a ride quality test must meet a 1/8 inch in 10-foot straightedge requirement in longitudinal and transverse directions. Bridges in horizontal curves having a radius of less than 1000 feet at the centerline and bridges within the superelevation transition of such curves are excluded from a test with the profilograph.

The Profile Index Value for bridge decks including the bridge end slabs shall be averaged for the left and right wheel path for each lane and where applicable, each auxiliary lane and taper, and shall not exceed 65 inches per mile for each lane. Auxiliary lanes, tapers, shoulders and other areas that are not checked with the profilograph, shall meet a 1/8 inch in 10-foot straightedge check made transversely and longitudinally across the deck or slab. In addition, individual bumps or depressions exceeding 0.3 of an inch, when measured from a chord length of 25 feet, shall be corrected and the surface shall meet a 1/8 inch in 10-foot straightedge check made transversely across the deck or slab.

Bridge decks and bridge end slabs not meeting the preceding requirements shall be corrected. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of grinding the bridge deck in accordance with this specification. All corrective work shall precede final surface texturing. After completion of final surface texturing, all surface areas

corrected by grinding shall be sealed with a nonstaining 40% minimum alkylalkoxysilane penetrating sealant applied per the manufacturer's directions.

In case the bridge end slabs are to be constructed on a future project, the bridge deck(s) alone shall be tested for ride quality using the acceptance procedure outlined above, except that the ride quality test will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge as possible and shall proceed forward across the bridge deck to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge.

Expansion joint installation shall be delayed and the joint temporarily bridged to facilitate operation of the profilograph and grinding equipment across the joint wherever feasible.

It shall be the Contractor's responsibility to schedule profilograph testing. The Contractor shall notify the Department at least five (5) days in advance of profilograph testing. The Contractor shall ensure that the area to be tested has been cleaned and cleared of all obstructions. Profilograph testing of bridge decks and bridge end slabs shall be performed by the Contractor under supervision of the Engineer. All profilograph testing shall be performed at no additional cost to the Department. The Contractor will be responsible for traffic control associated with this testing operation.

907-804.03.19.7.4.1--Grinding Bridge Decks.

907-804.03.19.7.4.1.1--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture portland cement concrete pavement with diamond blades. The effective wheel base of the machine shall not be less than 12.0 feet. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 3.0 feet forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least 3.0 feet wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at cracks, joints, or other locations.

907-804.03.19.7.4.1.2--Grinding. The grinding areas will be determined by the Contractor and approved by the Engineer. The Contractor shall develop and submit to the Engineer for approval a Grinding Plan. The Contractor shall allow up to 45 days for the Department to review the Plan prior to starting any grinding operations. This plan shall include as a minimum:

- 1) Name of the project superintendent in responsible charge of the grinding operation.
- 2) List and description of all equipment to be used.
- 3) Maximum depth of each pass allowed by the grinding equipment.
- 4) Maximum width of each pass allowed by the grinding equipment.
- 5) Details of a sequence of the grinding operation.
- 6) Complete data from Profilograph runs, based on a 0.3 inch bump height, for each wheel path over the entire bridge including bridge end slabs, which shall include profile index,

bump locations (in stations), bump heights and proposed final cross-slopes. When a computerized profilograph is used, a complete printout of the profile including the header information for each wheel path will be required.

- 7) Data showing reinforcing steel clearance in all areas to be ground.
- 8) A detailed drawing of the deck showing areas to be ground with station numbers and grinding depths clearly indicated.
- 9) A description of grinding in areas where drains are in conflict with grind areas.
- 10) Details of any changes in deck drainage, anticipated ponding, etc.

The Engineer will evaluate the grinding plan for conformance with the plans and specifications, after which the Engineer will notify the Contractor of any additional information required and/or changes that may be needed. Any part of the plan that is unacceptable will be rejected and the Contractor shall submit changes for reevaluation. All approvals given by the Engineer shall be subject to trial and satisfactory performance in the field, and shall not relieve the Contractor of the responsibility to satisfactorily complete the work.

The construction operation shall be scheduled and proceed in a manner that produces a uniform finished surface. Grinding will be accomplished in a manner that eliminates joint or crack faults while providing positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane. Auxiliary or ramp lane grinding shall transition as required from the mainline edge to provide positive drainage and acceptable riding surface.

The operation shall result in a finished surface that conforms as close as possible to the typical cross-section and the requirements specified in Subsection 907-804.03.19.7.4.1.3.

The Contractor shall establish positive means for removal of grinding residue. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities.

907-804.03.19.7.4.1.3--Final Surface Texture. The grinding process shall produce a finish surface that is as close as possible to grade and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall be approximately 1/16 inch higher than the bottoms of the grooves with approximately 53 to 57 evenly spaced grooves per foot. Grinding chip thickness shall be a minimum of 0.080 inches thick.

The finished bridge decks and bridge end slabs shall be retested for riding quality using a Contractor furnished profilograph meeting the requirements of Subsection 907-804.03.19.7.5. The finished results shall meet the following conditions:

- (a) Individual bumps or depressions shall not exceed 0.3 inches when measured from a chord length of 25 feet.
- (b) The final index value for the bridge deck and bridge end slabs shall be an average of both the right and left wheel paths of each lane and shall not exceed 65 inches per mile.

The final profilogram will be furnished to the Engineer for informational purposes.

907-804.03.19.7.5--Profilograph Requirements. The smoothness of the bridge deck will be determined by using a California Profilograph to produce a profilogram (profile trace) at each designated location. The surface shall be tested and corrected to a smoothness index as described herein with the exception of those locations or specific projects that are excluded from a smoothness test with the profilograph.

The profilograph, furnished and operated by the Contractor under supervision of the Engineer, shall consist of a frame at least 25 feet in length supported upon multiple wheels having no common axle. The wheels shall be arranged in a staggered pattern so that no two wheels will simultaneously cross the same bump. A profile is to be recorded from the vertical movement of a sensing mechanism. This profile is in reference to the mean elevation of the contact points established by the support wheels. The sensing mechanism, located at the mid-frame, may consist of a single bicycle-type wheel or a dual-wheel assembly consisting of either a bicycle-type (pneumatic tire) or solid rubber tire vertical sensing wheel and a separate bicycle-type (pneumatic tire) longitudinal sensing wheel. The wheel(s) shall be of such circumference(s) to produce a profilogram recorded on a scale of one (1) inch equal to 25 feet longitudinally and one (1) inch equal to one (1) inch (full scale) vertically. Motive power may be provided manually or by the use of a propulsion unit attached to the center assembly. In operation, the profilograph shall be moved longitudinally along the pavement at a speed no greater than 3 MPH so as to reduce bounce as much as possible. The testing equipment and procedure shall comply with the requirements of Department SOP.

The Contractor may elect to use a computerized version of the profilograph in lieu of the standard profilograph. If the computerized version of the profilograph is used, it shall meet the requirements of Subsection 907-804.03.19.7.5.1.

907-804.03.19.7.5.1--Computerized Profilograph.

907-804.03.19.7.5.1.1--General The computerized profilograph, furnished and operated by the Contractor under the supervision of the Engineer, shall be equipped with an on-board computer capable of meeting the following conditions.

Vertical displacement shall be sampled every three (3) inches or less along the bridge deck. The profile data shall be bandpass filtered in the computer to remove all spatial wavelengths shorter than two (2) feet. This shall be accomplished by a third order, low pass Butterworth filter. The resulting band limited profile will then be computer analyzed according to the California Profilograph reduction process to produce the required inches per mile index. This shall be accomplished by fitting a linear regression line to the length of bridge. This corresponds to the perfect placement of the blanking band bar by a human trace reducer. Scallop above and below the blanking band are then detected and totaled according to the California protocol. Bump/Dip analysis shall take place according to the California Profilograph reduction process.

The computerized profilograph shall be capable of producing a plot of the profile and a printout which will give the following data: Stations every twenty five (25) feet, bump/dip height and bump/dip length of specification (3/10 of an inch and 25 feet respectively), the blanking band width, date of measurement, total profile index in inches per mile for the measurement, total length

of the measurement, and the raw inches for each segment.

907-804.03.19.7.5.1.2--Mechanical Requirements. The profilograph shall consist of a frame twenty five (25) feet long supported at each end by multiple wheels. The frame shall be constructed to be easily dismantled for transporting. The profilograph shall be constructed from aluminum, stainless steel and chromed parts. The end support wheels shall be arranged in a staggered pattern such that no two wheels cross a transverse joint at the same time. The relative smoothness shall be measured by the vertical movement of an eight (8) inch or larger diameter sensing wheel at the midpoint of the 25-foot frame. The horizontal distance shall be measured by a twenty (20) inch or larger diameter pneumatic wheel. This profile shall be the mean elevation referenced to the twelve points of contact with the pavement established by the support wheels. Recorded graphical trace of the profile shall be on a scale of one inch equals one inch (full scale) vertical motion of the sensing wheel and one inch equals 25 feet horizontal motion of the profilograph.

907-804.03.19.7.5.1.3--Computer Requirements. The computer shall have the ability to produce output on sight for verification. The computerized output shall indicate the profile index for each specified section of bridge deck. Variable low and high pass third-order Butterworth filtering options shall be available. The printout shall be capable of showing station marks automatically on the output. Blanking band positioning for each specified section of the bridge deck shall be placed according to the least squares fit line of the collected data. Variable bump and dip tests shall be available to show “must correct” locations on the printout. The computer must have the ability to display on screen “must correct” conditions and alert the user with an audible warning when a “must correct” location has been located. The computer must have the ability to store profile data for later reanalysis. The measurement program must be menu driven and PC compatible. User selected options, identification, calibration factors, and time and date stamps shall be printed at the top of each printed report for verification. The control software must be upgradeable. A power source shall be included for each profilograph and be capable of supplying all power needs for a full days testing.

907-804.03.19.8--Finishing Horizontal Surfaces of Footings or Top Slabs of Box Bridges, Culverts, or Other Structures. The finishing of horizontal surfaces of footing or top slabs of box bridges, culverts, or other structures shall be achieved by placing an excess of material in the form and removing or striking off the excess with a template, forcing the coarse aggregate below the mortar surface. After the concrete has been struck off the surface shall be given a Class 6 finish.

907-804.03.19.9--Finishing Exposed Surfaces of Sidewalks. After the concrete has been deposited in place it shall be consolidated and the exposed surface shall be given a Class 6 finish. An edging tool of the required radius shall be used on all edges and at all expansion joints. The surface shall have a granular texture which will not be slick when wet.

Sidewalk surfaces shall be laid out in blocks with an approved grooving tool as shown on the plans or as directed.

907-804.03.20--Opening Bridges.

907-804.03.20.1--Public Traffic. Unless otherwise specified, concrete bridge decks shall be closed to public highway traffic for a period of at least 21 days after placing concrete.

907-804.03.20.2--Construction Traffic. Unless otherwise specified, concrete bridge decks shall be closed to construction traffic for the time required for curing in Subsection 907-804.03.17 and the minimum required compressive strength for the concrete placed is obtained.

907-804.03.21--Final Cleanup. Upon completion of the work all equipment, surplus materials, forms, and waste material shall be removed, the bridge cleaned, and the site of the work given a final cleanup.

907-804.03.22--Precast-Prestressed Concrete Bridge Members.

907-804.03.22.1--General. All installations and plants for the manufacture of precast-prestressed bridge members shall be PCI (Precast / Prestressed Concrete Institute) Certified. Bridge members manufactured in plants or installations not so approved will not be accepted for use in the work. The Contractor or other manufacturer shall employ a technician skilled in the adopted system of prestressing to supervise the manufacturing operations. This technician shall be certified according to the guidelines of this specification. The Contractor shall develop and implement a Quality Control Program as per Division I of PCI Quality Control Manual, 4th Edition. The Quality Control Program shall be submitted to the District Materials Engineer for approval.

907-804.03.22.2--Stressing Requirements. The jacks for stressing shall be equipped with accurate calibrated gauges for registering the jacking pressure. Means shall be provided for measuring elongation of strands to at least the nearest 1/16 inch.

Prior to beginning work, the Contractor or manufacturer shall have all jacks to be used, together with their gauges, calibrated by an approved laboratory. All jacks and gauges shall have an accuracy of reading within two percent. The testing agency shall furnish the Engineer a statement certifying that the jacks and gauges meet this requirement. During the progress of the work, if a gauge appears to be giving erratic results or if the gauge pressure and elongations indicate materially differing stresses, recalibration will be required.

Calibration of jacks and gauges shall be repeated at intervals deemed necessary by the Engineer. These intervals for calibration shall not exceed one year.

Shop drawings of prestressed beams, including an erection plan, shall be submitted in duplicate to the Bridge Engineer for approval prior to manufacture of members.

907-804.03.22.2.1--Methods. Plans for the particular bridge members will show prestressing by one of the following methods:

(A) Pretensioning. The prestressing strands are stressed initially. After the concrete is placed, cured, and has attained the compressive strength shown on the plans, the stress is transferred to the member. The method used for pretensions shall be in accordance to Division V of PCI Quality Control Manual, 4th Edition.

(B) Posttensioning. The posttensioning tendons are installed in voids or ducts and are stressed and anchored after development of the compressive strength specified on the plans. The voids or ducts are then pressure grouted.

(C) Combined Method. Part of the reinforcing is pretensioned and part posttensioned. Under this method all applicable requirements for the two methods specified shall apply to the respective stressing elements being used.

907-804.03.22.2.2--Alternate Details for Prestressed Members. In the event that the Contractor / Manufacturer desires to use materials or methods that differ in any respect from those shown on the plans or described in these specifications, the Contractor shall submit for approval full plan details on acceptable tracings suitable for reproduction and specifications which shall become the property of the Department. In order for alternate materials and/or methods to be considered, they will be required to comply fully with the following:

- A. Provisions equal to those stipulated in these specifications.
- B. Current AASHTO Specifications.
- C. Recommendations of materials manufacturer.
- D. Camber tolerance of beams and spans shown on plans.

Note: Alternate materials and methods will not be authorized on Federal-Aid Projects.

The Engineer shall be the sole judge as to the adequacy and propriety of any variation of materials or methods.

907-804.03.22.2.3--Stressing Procedure.

(A) General. Stressing shall be performed by suitable jacks working against unyielding anchorages and capable of maintaining the required stress for an indefinite period without movement or yielding. Strands may be stressed singularly or in a group.

The tension to be applied to each strand shall be as shown on the plans. The tension shall be measured by both jacking gauges and elongations in the strands and the result shall check within close limits.

It is anticipated that there will possibly be a difference in indicated tension between jack pressure and elongation of about five (5) percent. In this event, the discrepancy shall be placed on the side of slight overstress rather than understress.

In the event of an apparent discrepancy between gauge pressure and elongation of as much as five (5) percent, the entire operation shall be carefully checked, and the source of error determined before proceeding further.

Elongation is to be measured after the strands have been suitably anchored, and all possible slippage at the anchorages has been eliminated.

In all stressing operations, the stressing force shall be kept as nearly symmetrical about the vertical axis of the member as practicable.

(B) Pretensioning. All strands to be prestressed shall be brought to a uniform initial tension prior to being given their full pretensioning. This uniform initial tension of approximately 1000 to 2000 pounds shall be measured by suitable means such as a dynamometer so that its value can be used as a check against elongation computed and measured.

After the initial tensioning, the strand or group shall be stressed until the required elongation and jacking pressure is within the limits specified.

When the strands are stressed in accordance with the plan requirements and these specifications and all other reinforcing is in place, the concrete shall be placed in the prepared forms.

Strand stress shall be maintained until the concrete between anchorages has attained the required compressive strength as determined by cylinder tests, after which the strands shall be cut off flush with the ends of column members, and cut as shown on the plans for beams, girders, etc. Strands shall be cut or released in such a manner that eccentricity of prestress will be kept to a minimum and no damage to the member will result. The strand cutting pattern shall be as shown on the plans or as approved by the Bridge Engineer.

(C) Posttensioning. For all posttensioning tendons/bars the anchor plates shall set exactly normal in all directions to the axis of the tendon/bar. Parallel wire anchorage cones shall be recessed within the beams. Tensioning shall not take place until the concrete has reached the compressive strength shown on the plans.

Elongation and jacking pressures shall make appropriate allowance for all possible slippage or relaxation of the anchorage. Posttensioning tendons/bars shall be stressed in the order and manner shown on the plans.

The units shall be tensioned until the required elongations and jacking pressures are attained and reconciled within the limits specified in Subsection 907-804.03.22.2.3(A) with such overstresses as approved by the Engineer for anchorage relaxation.

Independent references shall be established adjacent to each anchorage to indicate any yielding or slippage that may occur between the time of initial stressing and final release of the strands.

Straight tendons/bars may be tensioned from one end. Unless otherwise specified, curved tendons shall be stressed by jacking from both ends of the tendons.

(D) Combined Method. In the event that girders are manufactured with part of the reinforcement pretensioned and part posttensioned, the applicable portions of the requirements listed herein shall apply to each type.

907-804.03.22.3--Manufacture.

907-804.03.22.3.1--Forms. The forms used for precast-prestressed bridge members shall meet the requirements of Division II of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.2--Placing and Fastening Steel. Placing and fastening of all steel used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.3--Holes for Prestressing Tendons/Bars. Holes provided in girders for prestressing tendons/bars shall be formed by means of inflatable rubber tubing, flexible metal conduit, metal tubing, or other approved means.

907-804.03.22.4--Placing and Curing Concrete.

907-804.03.22.4.1--Placing. The placing of concrete shall meet the applicable requirements of Division III of PCI Quality Control Manual, 4th Edition.

907-804.03.22.4.2--Curing. Initial and accelerated curing of all members shall meet the applicable requirements of Division IV of PCI Quality Control Manual, 4th Edition except for the following listed requirements.

The source of heat for accelerated cure shall be steam. Calibrated thermocouples shall be implanted into the concrete members to monitor areas expected to have maximum and minimum heat. Curing methods and procedures listed in the prestress producer's PCI Quality System Manual shall be approved by the Department before their implementation.

907-804.03.22.4.3--Removal of Side Forms. Side forms may be removed after the concrete has attained sufficient strength to maintain a true section. In order to obtain "sufficient strength", it may be necessary to cure members for 12 hours or more as prescribed in Subsection 907-804.03.22.4.2, or to attain a minimum compressive strength of 1000 psi.

If high-early-strength concrete is obtained by use of low slump (0 to 1.5-inch) concrete, vacuum process, or other approved methods, side forms may be removed earlier; however, approval of the methods and revision from normal schedules will be made only after inspections by the District Materials Engineer and Materials Division have determined that satisfactory results will be attained by the methods and schedules proposed.

907-804.03.22.4.4--Grouting. The holes through posttensioned members in which the tendons are installed shall be equipped with approved grouting vents. All prestressing tendons to be bonded shall be free of dirt, loose rust, grease, or other deleterious substances. Before grouting, the ducts shall be free of water, dirt, and other foreign substances. The ducts shall be blown out with compressed air until no water comes through the ducts. For long members with draped tendons an open tap at low points may be necessary. After completion of stressing, the annular space between sides of tendon and sides of hole shall be grouted as set in the following paragraphs.

With the grouting vent open at one end of the core hole, grout shall be applied continuously under moderate pressure at the other end until all entrapped air is forced out through the open grout vent, as evidenced by a steady stream of grout at the vent. Whereupon, the open vent shall be closed under pressure. The grouting pressure shall be gradually increased to a refusal of at least 75 psi and held at this pressure for approximately 10 seconds, and the vent shall then be closed under this pressure.

Portland cement grout shall consist of a mixture of:

- 1 part Type 1 portland cement
- 1/4 part fly ash
- 3/4 part washed sand *
- 4 to 6 gallons of water per bag of cement.

* all passing No. 16 sieve and not more than 5% retained on No. 30

Water-reducing admixtures, subject to approval by the Engineer, shall be used in accordance with the manufacturer's recommendations.

The grout shall be mixed in a mechanical mixer, shall have the consistency of heavy paint, and shall be kept agitated until placed.

Members shall not be moved before the grout has set, ordinarily at least 24 hours at 80°F or higher.

907-804.03.22.5--Finishing and Marking. Units shall be given a Class 1 finish at the plant and shall be given a Class 2 finish after erection when required.

Recesses in girders at end of diaphragm bars, holes left by form ties, and other surface irregularities shall be carefully cleaned and patched with an approved non-shrink commercial grout or a non-shrinkage mortar of the following composition:

- 1 part Type 1 portland cement
- 1 1/2 to 2 parts fine sand
- 1/2 to 3/4 ounces aluminum powder per bag of cement
- Approved admixture per Subsection 713.02.
- Sufficient water to produce a workable but rather stiff mix.

The units shall be clearly marked in accordance with Department's *Materials Division Inspection, Certification and Testing Manual*.

907-804.03.22.6--Handling, Storage, and Installation. Posttensioned members may be handled immediately after completion of stressing and grout has set. Pretensioned members may be handled immediately after release of tensioning. In either case, the members shall have developed a minimum compressive strength of 4000 psi prior to handling. In the event stressing is not done in a continuous operation, members shall not be handled before they are sufficiently stressed, as determined by the Engineer, to sustain all forces and bending moments due to handling. In the

handling, storage, and transporting of beams or girders, they shall be maintained in an upright position (position as cast) at all times and shall be picked up from points within distance from beam ends equal to beam depth or at pick-up points designated on the plans. Disregard of this requirement and dropping of units may be cause for rejection, whether or not injury to the unit is apparent. Piles shall be picked up and loaded for shipment at points shown by the suspension diagram on the plans. Extreme care shall be used in handling and storing piles to prevent damage. The dropping of a pile may be cause for rejection of same, whether or not there is apparent injury to the member.

Care shall be exercised during the storage, hoisting, and handling of precast units to prevent damage. Damaged units shall be replaced by the Contractor at no additional costs to the State.

When members are stacked for storage, each layer shall be supported at or near the pick-up points. Supports shall be carefully placed in a vertical line in order that the weight of any member will not stress an underlying member. To prevent damage in moving members it is suggested that rigid supports be covered with a cushion of wood or other resilient material.

Members shall not be transported until at least one day after the concrete has reached a compressive strength of 5000 psi or greater strength when shown on the plans.

Piles used in salt water shall not be driven until concrete is seven days old, and air-entrained concrete shall be used in such piles.

After prestressed concrete voided slab units are set, doweled and bolted in their final position the keyways and dowel holes shall be filled with an approved non-shrink grout. Traffic shall not be permitted on the spans for 24 hours after grouting, and heavy construction equipment exceeding 15 tons will not be permitted on the spans for a period of 72 hours after grouting.

Adjacent slab units that mismatch more than one-fourth inch shall be adjusted prior to grouting of the shear keys. The maximum deviation from cross-section and grade (exclusive of camber) at any point shall not exceed one-fourth inch; and when the surface is checked with a ten-foot straightedge applied both parallel and perpendicular to the centerline, the variance shall not exceed one-fourth inch.

In addition to the requirements set out in this section, the applicable requirements of Section 803 shall apply.

907-804.03.22.7--Tolerances for Accepting Precast Prestressed Concrete. Member shall meet the dimension tolerances set by Division VII of PCI Quality Control Manual, 4th Edition.

907-804.03.22.8--Testing of Materials. Concrete and aggregate testing shall meet the requirements of Division VI of PCI Quality Control Manual, 4th Edition, except that the concrete mixture design shall meet the requirements of Subsection 907-804.02.10. Also, in addition to concrete compressive tests samples made for detensioning and 28-day strength, test samples shall be made and tested in order to prove compliance to the requirements of Subsection 907-804.03.22.6 for handling and shipping prestressed members. Compressive strength test cylinders

for detensioning, handling and shipping shall receive the same type curing as the prestressed members for which they represent. Compressive strength samples shall be made each day for each prestress casting bed.

907-804.03.22.9--Testing Personnel. Technicians testing portland cement concrete used in the production of precast-prestressed members shall be PCI Quality Control Technician/Inspector Certified. Each producer of precast-prestressed members shall have at least one PCI Level II certified technician on site during production for Department projects.

907-804.03.22.10--Documentation. The Precast-Prestressed Producer for each precast-prestressed concrete bridge member shall maintain documentation as set forth in the Department's *Materials Division Inspection, Certification and Testing Manual*. Testing and inspection record forms shall be approved by the Central Laboratory and as a minimum contain information listed in Division VI of PCI Quality Control Manual, 4th Edition.

907-804.03.22.11--Use in the Work. Before any precast-prestressed member is incorporated into the work, documentation as described in Subsection 907-804.03.22.10 is required along with visual inspection of the member at the bridge construction site. Project Office personnel as per the Department's *Materials Division Inspection, Certification and Testing Manual* will make visual inspection of the precast-prestressed member at the bridge construction site.

907-804.04--Method of Measurement. Concrete, complete and accepted, will be measured in cubic yards. The concrete volume will be computed from the neat dimensions shown on the plans, except for such variations as may be ordered in writing by the Engineer. The quantity of concrete involved in fillets, scorings, and chamfers one square inch or less in cross-sectional area will be neglected. Deductions shall be made for the following:

- (1) The volume of structural steel, including steel piling encased in concrete.
- (2) The volume of timber piles encased in concrete, assuming the volume to be 0.80 cubic foot per linear foot of pile.
- (3) The volume of concrete piles encased in concrete.

No deduction will be made for the volume of concrete displaced by steel reinforcement, floor drains, or expansion joint material that is one inch or less in width normal to the centerline of the joint. Where railing is bid as a separate item, that portion of the railing above the top of the curb, above the surface of the sidewalk, or above the bridge roadway, as the case may be, will not be included in the measurement of concrete, but will be measured as railing. Massive pylons or posts which are to be excepted from payment for railing and are intended to be measured for as concrete will be so noted on the plans.

When shown on the plans or directed by the Engineer, concrete placed as a seal for cofferdams will be measured by the cubic yard actually in place, except that no measurement will be made of seal concrete placed outside of an area bounded by vertical planes 18 inches outside the neat lines of the footing as shown on the plans or as directed and parallel thereto.

Reinforcing steel will be measured and paid for in pounds as set out in Section 805.

Unless otherwise specified, structural steel will be measured and paid for as set out in Section 810.

Excavation for bridges will be measured and paid for as in Section 801.

Piling will be measured and paid for as set out in Sections 802 and 803.

Railing will be measured and paid for as set out in Section 813.

Prestressed concrete beams and plank will be measured by the linear foot.

Prestressed concrete voided slab units, interior and exterior with railing, and precast concrete caps, intermediate and end cap with winged abutment wall, of the size and type specified will be measured by the unit complete in place and accepted. Railing, winged abutment walls, grout, tie rods, nuts, washers, bearing pads and other appurtenances will not be measured for separate payment.

907-804.05--Basis of Payment. Concrete will be paid for at the contract unit price per cubic yard for the class or classes specified, complete in place. Prestressed concrete beams and plank will be paid for at the contract unit per linear foot of specified size and type.

Prestressed concrete voided slab units and precast caps will be paid for at the contract unit price per each for the specified types and sizes, complete in place and accepted; which price shall be full compensation for furnishing, hauling and erecting the members; including all prestressing reinforcement and other reinforcement in the members. Payment at the contract unit prices bid shall be full compensation for furnishing all materials, equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-804-A: Bridge Concrete, Class ____	- per cubic yard
907-804-B: Box Bridge Concrete, Class ____	- per cubic yard
907-804-C: <u>Length</u> Prestressed Concrete Beam, Type ____	- per linear foot
907-804-D: <u>Length</u> Prestressed Concrete Plank	- per linear foot
907-804-E: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Interior	- per each
907-804-F: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Exterior	- per each
907-804-G: <u>Length</u> Precast Concrete Caps, End Unit with Wall	- per each
907-804-H: <u>Length</u> Precast Concrete Caps, Intermediate Unit	- per each

SECTION 905 PROPOSAL

Date 10/27/16Hattiesburg
Forrest County, Mississippi

Sirs: The following proposal is made on behalf of RJM - McQueen Contracting, Inc.
of Collins, MS
for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of:

Neel - Schaffer

The Specifications are the current Standard Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

Attached hereto is a certified check, cashier's check or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law).

INSTRUCTION TO BIDDERS: Alternate and Optional Items on Bid Schedule.

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.
2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.
3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 102.06 prior to or at the time of execution of the contract.
4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

SECTION 905 PROPOSAL (Continued)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for five percent (5%) of the total bid and hereby agree that in case of my (our) failure to execute the contract and furnish bonds within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the Local Public Agency as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. _____	DATED _____	ADDENDUM NO. _____	DATED _____
ADDENDUM NO. _____	DATED _____	ADDENDUM NO. _____	DATED _____

TOTAL ADDENDA: _____
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE 10/27/16

RJM-McQueen Contracting, Inc.

BY [Signature] Contractor
Signature

TITLE President

ADDRESS 80 Ramsey McQueen Rd
Collins. Ms 39428

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of Mississippi and the names, titles and business addresses of the executives are as follows:

<u>Regina McQueen</u>	<u>80 Ramsey McQueen Rd Collins, MS</u>
President	Address
<u>Regina McQueen</u>	<u>80 Ramsey McQueen Rd Collins, MS</u>
Secretary	Address
<u>Regina McQueen</u>	<u>80 Ramsey McQueen Rd Collins, MS</u>
Treasurer	Address

The following is my (our) itemized proposal.

Revised 11/2008

SECTION 905 PROPOSAL (Bid Sheet No. 3-5)

PROJECT NUMBER: STP-7197-00(002) LPA / 106879-701000

COUNTY: FORREST

PROJECT DESCRIPTION: TUSCAN AVENUE SIDEWALK PROJECT

I (We) agree to complete the entire project within the specified contract time.

***** SPECIAL NOTICE TO BIDDERS *****

BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED.
BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATE LOCATED AT THE END OF THE BID SHEETS IS SIGNED.

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
201-A001	1	ACRE	CLEARING AND GRUBBING	1,000.00	1,000.00
202-A001	1	LS	REMOVAL OF OBSTRUCTIONS	XXXX	7,000.00
202-B035	1,475	SQ. YD.	REMOVAL OF CONCRETE SIDEWALK	12.00	17,700.00
202-B057	2	EACH	REMOVAL OF INLETS, ALL SIZES	800.00	1,600.00
202-B064	24	LIN. FT.	REMOVAL OF PIPE, 8" AND ABOVE	9.00	216.00
202-B078	821	SQ. YD.	REMOVAL OF PAVEMENT, ALL TYPES AND DEPTHS	13.00	10,673.00
202-B093	270	LIN. FT.	REMOVAL OF CURB & GUTTER, ALL TYPES	18.00	4,860.00
203-A003	50	CU. YD.	UNCLASSIFIED EXCAVATION, FM, AH	10.00	500.00
203-EX017	50	CU. YD.	BORROW EXCAVATION, AH, FME, CLASS B9	30.00	1,500.00
203-G003	10	CU. YD.	EXCESS EXCAVATION, FM, AH	80.00	800.00
211-B001	100	CU. YD.	TOPSOIL FOR SLOPE TREATMENT, CONTRACTOR FURNISHED	18.00	1,800.00
907-213-A001	1	TON	AGRICULTURAL LIMESTONE	75.00	75.00
907-216-A001	1,600	SQ. YD.	SOLID SODDING, CENTIPEDE	2.30	3,680.00
219-A001	260	KGAL	WATERING	20.00	5,200.00
220-A001	1	ACRE	INSECT PEST CONTROL	50.00	50.00
234-A001	400	LIN. FT.	TEMPORARY SILT FENCE	4.00	1,600.00
907-234-A002	100	LIN. FT.	WATTLES, 12"	12.00	1,200.00
907-246-A002	100	EACH	SANDBAGS	4.00	400.00
907-601-A001	14	CU. YD.	CLASS "B" STRUCTURAL CONCRETE	780.00	10,920.00
907-601-B003	3	CU. YD.	CLASS "B" STRUCTURAL CONCRETE, MINOR STRUCTURES	1,200.00	3,600.00
602-A001	1,660	LBS.	REINFORCING STEEL	1.55	2,573.00
604-A001	244	LBS.	CASTING	3.00	732.00
604-B002	200	LBS.	GRATING	6.00	1,200.00
907-603-PE212	16	LIN. FT.	15" CORRUGATED POLYETHYLENE PIPE	22.00	352.00

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
907-603-PP005	2	EACH	24" PREFORMED POLYETHYLENE DRAINAGE CATCH BASIN	1,500.00	3,000.00
608-A001	3,142	SQ. YD.	CONCRETE SIDEWALK, WITHOUT REINFORCEMENT	41.50	130,393.00
609-D006	160	LIN. FT.	COMBINATION CONCRETE CURB AND GUTTER, TYPE I	33.00	5,280.00
613-D006	24	EACH	ADJUSTMENT OF WATER METER	220.00	5,280.00
613-D011	7	EACH	ADJUSTMENT OF WATER VALVE	300.00	2,100.00
614-B002	735	SQ. YD.	CONCRETE DRIVEWAY, WITH REINFORCEMENT, 6-INCH THICKNESS	52.00	38,220.00
907-618-A001	1	LS	MAINTENANCE OF TRAFFIC	XXXX	6,110.00
907-618-B001	1	SQ. FT.	ADDITIONAL CONSTRUCTION SIGNS	\$10.00	\$10.00
620-A001	1	LS	MOBILIZATION	XXXX	12,170.00
630-A001	18	SQ. FT.	STANDARD ROADSIDE SIGNS, SHEET ALUMINUM, 0.080" THICKNESS	70.76	1,273.68
630-C004	28	LIN. FT.	STEEL U-SECTION POSTS, 3.0 TO 3.5 LB/FT	4.05	113.40
907-626-G004	2,912	LIN. FT.	THERMOPLASTIC DETAIL STRIPE, WHITE, 6" EQUIV.	2.30	6,697.60
907-626-H005	6	SQ. FT.	THERMOPLASTIC LEGEND, WHITE	119.00	714.00
907-626-E003	1,200	LIN. FT.	6" THERMOPLASTIC TRAFFIC STRIPE, CONTINUOUS YELLOW	1.75	2,100.00
TOTAL BID				\$	292,692.68

292,692.68

SECTION 905 PROPOSAL (Bid Sheet No. 5-5)

PROJECT NUMBER: STP-7197-00(002) LPA / 106879-701000

COUNTY: FORREST

PROJECT DESCRIPTION: TUSCAN AVENUE SIDEWALK PROJECT

COMPLETE ITEM NOS. 1, 2 AND/OR 3 AS APPROPRIATE, SEE NOTICE TO BIDDERS NO. 5266 AND SUPPLEMENT.

1. I/We agree that no less than _____ percent shall be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE and WBE).
2. Classification of Bidder: Small Business (DBE) ☒ Small Business (WBE) ☒
3. A joint venture with a Small Business (DBE/WBE): YES ☐

*** SIGNATURE STATEMENT***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFY THAT THE FIGURES SHOWN THERIN CONSTITUTE THEIR OFFICIAL BID.



BIDDER'S SIGNATURE

**Certification with regard to the Performance of Previous
Contracts or Subcontracts subject to the Equal Opportunity
Clause and the filing of Required Reports**

The Bidder X, proposed Subcontractor , hereby certifies that he has X, has not , participated in a previous contract or subcontract subject to the Equal Opportunity Clause, as required by Executive Orders 10925, 11114, or 11246, and that he has , has not , filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

RJM-McQueen Contracting, Inc.
(COMPANY)
BY [Signature]
President
(TITLE)

DATE: 10/27/16

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and Subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime Contractors and Subcontractors who have participated in a previous contract or subcontract subject to the Executive orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such Contractors submit a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

NON-COLLUSION AFFIDAVIT

(Execute in duplicate)

State of Mississippi

County of CovingtonI, Regina M^cQueen,
(Name of person signing certification)individually, and in my capacity as President of
(Title)RJM-M^cQueen Contracting, Inc. do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

RJM-M^cQueen Contracting, Inc., Bidder
(Name of Firm, Partnership, or Corporation)on Project No. STP-7197-00(002) LPA/106879-701000,in Forrest County County(ies), Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in (b) above; and
- d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently \$25,000) which are excluded from the certification requirements.

The bidder further certifies, to the best of his or her knowledge and belief, that:

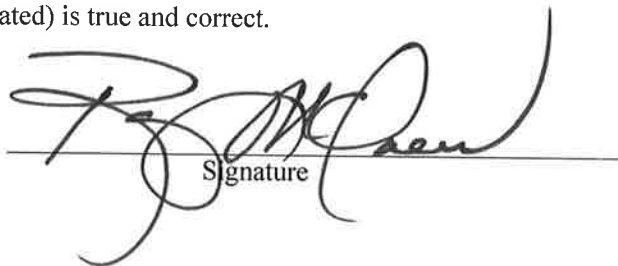
- 1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000. The bidder shall include the language of the certification in all subcontracts exceeding \$100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on

10/27/16


Signature

(11/23/92F)

LOCAL PUBLIC AGENCY (LPA)

SECTION 902

CONTRACT FOR _____
LOCATED IN THE COUNTY OF _____
STATE OF MISSISSIPPI,

This contract entered into by and between the Local Public Agency _____
_____ (hereinafter "LPA") on one hand, and the undersigned contractor, on the other
witnesseth;

That, in consideration of the payment by the LPA of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the LPA.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the LPA or their authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Mississippi Department of Transportation or Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

Manager, WIN Job Center nearest the project

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the ____ day of _____, 20____.

Contractor(s)

By _____

Title _____

Signed and sealed in the presence of:
(Names and address of witnesses)

By _____

LPA Official

LPA Clerk

Award authorized by the LPA in session on the ____ day of _____, 20____, as recorded _____

LOCAL PUBLIC AGENCY (LPA)

S E C T I O N 9 0 3
PERFORMANCE AND PAYMENT BOND

CONTRACT BOND FOR _____

LOCATED IN THE COUNTY OF _____

STATE OF MISSISSIPPI,

Know all men by these presents: that we, _____
(Contractor)

(hereinafter "Principal"), a _____

residing at _____ in the State of _____

and _____
(Surety)

residing at _____ in the State of _____

authorized to do business in the State of Mississippi, under the laws thereof, as surety, are held and firmly bound

unto the Local Public Agency _____, (hereinafter

"LPA"), in the sum of _____

(\$ _____) Dollars, lawful money of the United States of America, to be

paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or

assigns jointly and severally by these presents.

The conditions of this bond are such, that whereas the said Principal, has (have) entered into a contract with the

LPA, bearing the date of _____ day of _____ A.D. _____ hereto annexed, for the

construction of certain project(s) in the State of Mississippi as mentioned in said contract in accordance with the

Contract Documents therefor, on file in the offices of the LPA.

Now therefore, if the above bounden Principal in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said LPA from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the LPA at the instance of any officer of the LPA authorized in such cases, for double any amount in money or property, the LPA may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the

LOCAL PUBLIC AGENCY (LPA)

Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes, licenses, assessments, contributions, damages, any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the LPA Official, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

_____	_____
(Contractors) Principal	Surety
By _____	By _____
	(Signature) Attorney in Fact
	Address: _____

Title _____	_____
(Contractor's Seal)	(Printed) Mississippi Agent

	(Signature) Mississippi Agent
	Address: _____

	(Surety Seal)

	Mississippi Insurance ID Number

Date 10/8/15

**Guidance for Federal Spending Transparency:
Subaward and Executive Compensation Data
Reporting Requirements for FFATA Implementation**

Summary

1. Prime awardees and sub awardees of Federal financial assistance must report executive compensation data if they meet the statutory reporting thresholds. For the Federal-aid Highway Program, this means that the State, and any subawardees of Federal-aid funds through the State, is subject to the executive compensation reporting requirement.

- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

Background

Beginning October 1, 2010, guidance directs compliance with the Transparency Act to report prime and first-tier subaward data. Federal agencies and prime awardees will report to ensure disclosure of Federal contract and grant subaward and executive compensation data.

The Transparency Act requires information disclosure concerning entities receiving Federal financial assistance through Federal awards such as Federal contracts, sub-contracts, grants, and sub-grants.

Specifically, the Transparency Act's section 2(b)(1) requires the Office of Management and Budget ("OMB") to ensure the establishment of a publicly available website that contains the following information about each Federal award:

- name of the entity receiving the award;
- amount of the award;
- information on the award including transaction type, funding agency, the North American Industry Classification System code or Catalog of Federal Domestic Assistance number, program source, award title descriptive of the purpose of each funding action;

- location of the entity receiving the award and primary location of performance under the award, including city, State, congressional district, and country;
- unique identifier of the entity receiving the award and the parent entity of the recipient, should the entity be owned by another entity; and
- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED:

Prime Contractor Firm Name

APPROVED BY:

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF %.

INSTRUCTIONS :

- SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
- 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
- THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
- IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
- IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED:

Prime Contractor Firm Name

APPROVED BY:

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C ".
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B ".
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B ". A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: STP-7197-00(002)LPA/106889
County: Forrest

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

Firm Name: Road-Pro Safety, Inc.
Contact Name/Title: Peggy Miley, President
Firm Mailing Address: P.O. Box 54242 JACKSON, MS 39288-4292
Phone Number: 601-932-8220
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: Traffic Control Products, Co. Inc.
Contact Name/Title: Wendy Garner, President
Firm Mailing Address: P.O. Box 820 Brandon, MS 39043
Phone Number: 601-939-2415
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm


SUBMITTED BY (Signature)
RSM-McQueen Contracting, Inc.
FIRM NAME

Submit this form to the LPA as a part of your bid package. If this form is not signed and included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504.

Please make copies of this form when needed and also add those copies to the bid package.



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-72

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Hawkins Sidewalk Project-Construction Contract

Title: Approve and Authorize Mayor to execute contract between the City of Hattiesburg and Fairley Construction in the amount of \$ 209,456.48 for construction services related to the Safe Routes to School-Hawkins Sidewalk Project (Project No. SRSP 7207-00(004) LPA/106877-401000).

Type: Action Item

Drafter: Marie Harris

In Control: City Council

Reference: Lamar
Rutland

Attachments: Hawkins Sidewalk Contract, Revised - Hawkins Sidewalk Contract

File
Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication
Information:

History of Legislative File

*SPECIAL PROVISIONS, PROPOSAL AND CONTRACT DOCUMENTS
FOR*

*THE CONSTRUCTION OF SIDEWALK
FEDERAL AID PROJECT NUMBER
SRSP 7207-00(004) LPA/106877-401000*

***SAFE ROUTES TO SCHOOL
HAWKINS SIDEWALK PROJECT***

***FOR THE
CITY OF HATTIESBURG
HATTIESBURG, MISSISSIPPI
FORREST COUNTY***



2016

PREPARED BY



NEEL-SCHAFFER
Solutions you can build upon

**BIDDER CHECK LIST
(FOR INFORMATION ONLY)**

- _____ All unit prices and item totals have been entered in accordance with Subsection 102.06 of the Mississippi Standard Specifications for Road and Bridge Construction.
- _____ First sheet of SECTION 905--PROPOSAL has been completed.
- _____ Second sheet of SECTION 905--PROPOSAL has been completed and signed.
- _____ Addenda, if any, have been acknowledged. Second sheet of Section 905 listing the addendum number has been substituted for the original second sheet of Section 905. Substituted second sheet of Section 905 has been properly completed, signed, and added to the proposal.
- _____ DBE/WBE percentage, when required by contract, has been entered on last sheet of the bid sheets of SECTION 905--PROPOSAL.
- _____ Form OCR-485-LPA has been completed and signed.
- _____ The last sheet of the bid sheets of SECTION 905--PROPOSAL has been signed.
- _____ Equal Opportunity Clause Certification, when included in contract, has been completed and signed.
- _____ The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been executed in duplicate.
- _____ A certified check, cashier's check or bid bond payable to the Local Public Agency in the principle amount of 5% of the bid has been included with project number identified on same. Bid bond has been signed by the bidder and has also been signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent for the Surety with Power of Attorney attached.
- _____ The Notice to Bidders regarding DUNS Requirements has been completed and included in the contract documents.

Return the proposal and contract documents in its entirety in a sealed envelope. DO NOT remove any part of the contract documents; exception – an addendum requires substitution of second sheet of Section 905. A stripped proposal is considered as an irregular bid and will be rejected.

Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

CONTENTS

PROJECT: SAFE ROUTES TO SCHOOL–HAWKINS SIDEWALK PROJECT
PROJECT NO. SRSP-7207-00(004)LPA/106877-401000
CITY OF HATTIESBURG, MISSISSIPPI

Bidder's Checklist

Section 901 - Advertisement for Bids

Section 904 - Notice to Bidders

#1:	Governing Specifications
#2LPA:	Designating Owner and Engineer
#3:	Final Cleanup
#151:	Gopher Tortoises
#640:	Fiber Reinforced Concrete
#1322:	Non-use of Precast Drainage Units
#1405:	Errata and Modifications to the 2004 Standard Specifications
#1546:	Advancement of Materials
#1902LPA:	Disadvantaged Business Enterprise Forms
#1928:	Federal Bridge Formula
#2168:	Fuel and Material Adjustments
#2382:	Status of Right of Way
#2382:	Attachments for Status of Right of Way
#4488:	DBE Forms, Participation and Payment
#4565:	Manual on Uniform Traffic Control Devices
#4566:	DUNS Requirement
#5053:	Contractor Correspondence
#5266LPA:	Supplement to Disadvantage Business Enterprise
#5266:	Disadvantage Business Enterprise
#5405:	Traffic Control Devices
#5412:	Weight Limits
#5865LPA:	Sampling and Testing of Concrete on Small LPA Projects
#5866LPA:	Payroll Requirements
#7001:	Contract Time

Section 906 - County Wage Rates
Supplement to Form FHWA-1273
Required Federal Contract Provision Form FHWA-1273
Executive Order 11246

Section 907 - 907-101-4: Definitions
 907-102-4LPA: Bidding Requirements and Conditions
 907-103-11: Award and Execution of Contract
 907-104-5: Scope of Work
 907-105-8: Control of Work
 907-107-13: Supplement to Legal Relations & Responsibility to Public

907-107-13:	Legal Relations & Responsibility to Public
907-108-37LPA:	Supplement to Prosecution and Progress
907-108-37LPA:	Prosecution and Progress
907-109-8:	Measurement and Payment
907-110-2:	Wage Rates
907-213-2:	Agricultural Limestone
907-216-1:	Solid Sodding
907-237-4:	Wattles
907-246-3:	Sandbags
907-601-1:	Structural Concrete
907-618-13:	Temporary Construction Signs
907-626-25:	Thermoplastic Traffic Markings
907-701-5:	Supplement to Hydraulic Cement
907-701-5:	Hydraulic Cement
907-707-4:	Rubber Type Gaskets
907-711-4:	Synthetic Structural Fiber Reinforcement
907-713-6:	Admixtures for Concrete
907-714-8:	Miscellaneous Materials
907-715-4:	Roadside Development Materials
907-720-2:	Pavement Marking Materials
907-804-19:	Supplement to Concrete Bridges and Structures
907-804-19:	Concrete Bridges and Structures

Construction Progress Schedule

Section 905 - Proposal

- Proposal, Proposal Sheet
- Bid Sheets
- Certification of Performance – Prior Federal Aid Projects
- Affidavit Regarding Non-Collusion, Debarment and Suspension

Section 902 - Contract Form

Section 903 - Contract Bond Forms

Executive Compensation Certification

Guidance for Federal Spending Transparency

OCR-481-LPA – Disadvantaged Business Enterprise List

OCR-485-LPA – List of Firms Submitting Quotes

(Revisions to the Above Will Be Indicated on the Second Sheet of Section 905 as Addenda)

SECTION 901 - ADVERTISEMENT FOR BIDS

**CITY OF HATTIESBURG
FORREST COUNTY, MISSISSIPPI**

NOTICE TO CONTRACTORS

**SAFE ROUTES TO SCHOOL – HAWKINS SIDEWALK PROJECT
FEDERAL-AID PROJECT NO.
SRSP 7207-00(004) LPA/106877-401000**

Sealed bids will be received by the City of Hattiesburg, at the City Clerk's office, located at 200 Forrest Street, Hattiesburg, Mississippi 39401, until 10:00 a.m. local time, on Thursday, October 13, 2016 for supplying all labor, equipment, and materials (as specified) necessary for the construction of the above referenced project. All bids so received will be publicly opened and read aloud.

Work consists of constructing an 8' wide concrete sidewalk along Gordon's Creek, and a 5' wide concrete sidewalk along Green Street and West Street.

The above general outline of features of the work does not in any way limit the responsibility of the contractor to perform all work and furnish all plant, labor, equipment and materials required by the specifications and the drawings referred to therein.

Plans, contract documents and special provisions and proposal forms are on file for public inspection in the office of the City of Hattiesburg, City Clerk's Office located at 200 Forrest Street, Hattiesburg, Mississippi 39401 and in the office of Neel-Schaffer, Inc., Post Office Box 1487, Hattiesburg, MS 39403-1487 (704 Hardy Street, Telephone No. 601-545-1565). One copy of the contract documents and special provisions together with the contract plans may be procured from Neel-Schaffer, Inc. upon payment of \$100.00, none of which is refundable.

The attention of bidders is directed to the Special Provisions governing selection and employment of labor.

Minimum wage rates for Federal-Aid projects have been predetermined by the Secretary of Labor and are subject to Public Law 87-581 Work Hours Act of 1962, as set forth in the Special Provisions. Minimum wage rates for all other projects have been predetermined and set forth in advertised specifications.

The City of Hattiesburg hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged and women's business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The award of this contract will be contingent upon the Contractor satisfying the DBE/WBE requirements.

The 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction, adopted by the Mississippi Department of Transportation, as referred to herein, may be purchased from the Mississippi Department of Transportation.

Each bid shall be accompanied by a Certified Check on a solvent bank or a Bidder's Bond issued by a Surety Company licensed to operate in the State of Mississippi, in the amount of five percent (5%) of the total bid price, payable to the City of Hattiesburg as bid security. Bidders shall also submit a current financial statement, if requested by the City. The successful bidder will be required to furnish a performance and payment bond in the amount of 100 percent of the contract amount. Both bonds shall be signed or countersigned by a Mississippi Resident Agent.

The proposal and contract documents in its entirety shall be submitted in a sealed envelope and deposited with the City Clerk, 200 Forrest Street, Hattiesburg, Mississippi prior to the hour and date above designated.

The City of Hattiesburg reserves the right to reject any or all proposals, to waive technicalities or irregularities, or to advertise for new proposals, and the decision of the City of Hattiesburg to reject any bid or proposal shall not be cause for any liability or damages against the City of Hattiesburg, any officers or employees.

The bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within the Contract Time. The bidder must also agree to pay as liquidated damages the sum specified in the Standard Specifications per day for each calendar day of overrun in Contract Time that work is not completed.

Work to be performed shall be in accordance with the "Mississippi State Highway Standard Specifications for Road and Bridge Construction, 2004", together with all amendments and/or special provisions and/or addenda to the standards duly approved and adopted, unless otherwise noted in these specifications.

The attention of Bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.

City Clerk
City of Hattiesburg, Mississippi

Dates of Publication:

September 11, 2016

September 18, 2016

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Governing Specifications

The current (2004) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation Commission is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained herein. Copies of the specification book may be purchased from the MDOT Construction Division.

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal contain references to the 1990 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2004 Edition of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 2 LPA

CODE: (SP)

DATE: 06/03/2015

SUBJECT: Designating Owner and Engineer (Hattiesburg, Mississippi)

PROJECT: SRSP-7207-00(004) /106877-401000, Forrest County

Any reference in the Contract Documents to the State of Mississippi, Mississippi Department of Transportation, Mississippi Transportation Commission, or any official thereof shall be interpreted to mean *City of Hattiesburg*, the "Owner".

Any reference in the Standard Specifications to the Project Engineer, District Engineer, Office Engineer, or Engineer shall be interpreted to mean the *Engineer for City of Hattiesburg, Mississippi, Neel-Schaffer, Inc.*

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3

CODE: (SP)

DATE: 05/03/2004

SUBJECT: Final Clean-Up

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such as glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 151

CODE: (IS)

DATE: 06/18/2004

SUBJECT: Gopher Tortoises

Bidders are hereby advised that the Contractor will be required to make special considerations regarding gopher tortoises on this project. In addition to the normal required documentation associated with borrow pits, the Contractor shall, for each site used to obtain or dispose of materials associated with this project, provide the Engineer with a letter from a qualified biologist certifying that the site was inspected prior to any clearing of vegetation or disposal of project materials and that the site is not inhabited by gopher tortoises, or appropriate avoidance measures have been installed. No individual lacking the proper State or Federal license shall touch or otherwise harass a gopher tortoise.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 640

CODE: (IS)

| DATE: 09/26/2005

SUBJECT: Fiber Reinforced Concrete

Bidders are hereby advised that synthetic structural fibers meeting the requirements of Subsection 907-711.04 may be used in lieu of wire mesh in some items of construction. Substitution of fibers for wire mesh will be allowed in the construction of paved ditches, paved flumes, paved inlet apron, driveways, guard rail anchors and pile encasements. Substitution in any other items of work must be approved by the State Construction Engineer prior to use.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1322

CODE: (SP)

DATE: 1/22/2007

SUBJECT: Non-Use of Precast Drainage Units

Bidders are hereby advised that the use of precast inlets and junction boxes will **NOT** be allowed on this project. Subsection 601.02.3 states that " the Contractor may request approval from the Engineer to furnish and install precast units in lieu of cast-in-place units". Should the Contractor make this request, the request will be denied.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1405

CODE: (IS)

DATE: 03/15/2007

SUBJECT: ERRATA AND MODIFICATIONS TO THE 2004 STANDARD SPECIFICATIONS

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
101	201.01	In the second sentence of the first paragraph, change “salvable” to “salvageable”.
107	202.04	In the fourth sentence of the fourth paragraph, change “yard” to “feet”.
107	202.05	In the list of units measurements for 202-B, add “square foot”.
132	211.03.4	In the second sentence of the second paragraph, change “planted” to “plated”.
192	306.02.4	In the first line of the first paragraph, delete the word “be”.
200	307.03.7	In the fourth sentence of the second paragraph, change “lime-fly ash” to “treated”.
236	401.01	Change the header from “Section 403” to “Section 401”.
242	401.02.3.2	In the first sentence of the third full paragraph, add “1/8” in the blank before the inch mark.
250	401.02.6.3	In the second sentence of the first paragraph on page 250, change “rutting over ” ” to “rutting over 1/8" ”.
253	401.02.6.4.2	In the paragraph preceding the table, change “91.0” to “89.0”.
259	401.03.1.4	In the first paragraph, change “92.0 percent” to “the specified percentage (92.0 or 93.0)”.
269	403.03.2	In the table at the top of page 269, change the PI requirement from “ = ” to “ ≤ ”.

278	404.04	In the second sentence, change the subsection from "401.04" to "403.04".
283	409.02.2	Change "PG 64-22" to "PG 67-22".
294	413.02	In the first sentence of the second paragraph, change "707.02.1.3" to "Subsection 707.02.1.3".
340	511.04	In the second sentence of the second paragraph, change "412" to "512".
349	601.03.3	In the first sentence, change "804.03.2" to "804.03.5".
355	603.02	Change the subsection reference for Joint mortar from "707.03" to "714.11".
369	604.04	In the first sentence, change "601.04" to "Subsection 601.04".
427	619.04	Delete the second paragraph.
442	625.04	In the third paragraph, change "626.04" to "Subsection 626.04".
444	626.03.1.2	Delete the third sentence of the first paragraph.
464	631.02	Change the subsection reference for Water from "714.01.0" to "714.01.1".
570	682.03	Change the subsection number from "682-03" to "682.03".
575	683.10.4	Change the subsection number from "683.10.4" to "683.04".
575	683.10.5	Change the subsection number from "683.10.5" to "683.05".
596	701.02	In the table under the column titled "Cementations material required", change Class F, FA" to "Class F FA,".
603	702.11	In the first sentence, change "702.12" to "Subsection 702.12".
612	703.04.2	In the fifth paragraph, delete "Subsection 703.11 and".
616	703.07.2	In the Percentage By Weight Passing Square Mesh Sieves table, change the No. 10 requirement for Class 7 material from "30 - 10" to "30 - 100".

618	703.13.1	In the first sentence of the first paragraph, change “703.09” to “703.06”.
618	703.13.2	In the first sentence, change “703.09” to “703.06”.
671	712.06.2.2	In the first sentence, change “712.05.1” to “Subsection 712.05.1”.
689	714.11.2	In the first sentence, change “412” to “512”.
709	715.09.5	In the first sentence of the first paragraph, change “guage” to “gauge”.
717	717.02.3.4	In the top line of the tension table, change “1 1/2” to “1 1/8” and change “1 1/8” to “1 1/2”.
741	720.05.2.2	In the last sentence of this subsection, change “720.05.2.1” to “Subsection 720.05.2.1”.
827	803.03.2.3.7.5.2	In the first sentence of the second paragraph, change “803.03.5.4” to “803.03.2.3.4”.
833	803.03.2.6	In the first sentence, change “803.03.7” to “803.03.2.5”.
854	804.02.11	In the last sentence of the first paragraph, change “automatically” to “automatic”.
859	804.02.13.1.3	In the last sentence, change Subsection “804.02.12.1” to “804.02.12”.
879	804.03.19.3.2	In the first sentence of the third paragraph, change “listed on of Approved” to “listed on the Approved”.
879	804.03.19.3.2	In the last sentence of the last paragraph, change “804.03.19.3.1” to “Subsection 804.03.19.3.1”.
962	814.02.3	In the first sentence, change “710.03” to “Subsection 710.03”.
976	820.03.2.1	In the first sentence, change “803.02.6” to “803.03.1.7”.
976	820.03.2.2	In the first sentence, change “803.03.9.6” to “803.03.1.9.2”.
985	Index	Change the subsection reference for Petroleum Asphalt Cement from “702.5” to “702.05”.

985	Index	Change the subsection reference for the Definition of Asphaltic Cement or Petroleum Asphalt from "700.2" to "700.02".
985	Index	Change the subsection reference for Automatic Batchers from "501.03.2.4" to "804.02.10.4".
986	Index	Delete "501.03.2" as a subsection reference for Batching Plant & Equipment.
988	Index	Change the subsection reference for the Central Mixed Concrete from "501.03.3.2" to "804.02.11".
988	Index	Change the subsection reference for the Concrete Batching Plant & Equipment from "501.03.2" to "804.02.11".
999	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers.
1001	Index	Change the subsection reference for Edge Drain Pipes from "605.3.5" to "605.03.5".
1002	Index	Change the subsection reference for Metal Posts from "713.05.2" to "712.05.2".
1007	Index	Change the subsection reference for Coarse Aggregate of Cement Concrete Table from "703.3" to "703.03".
1007	Index	Change the subsection reference for Composite Gradation for Mechanically Stabilized Courses Table from "703.8" to "703.08".
1009	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers and Truck Agitators.
1010	Index	Delete reference to "Working Day, Definition of".

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1546

CODE: (SP)

DATE: 05/23/2007

SUBJECT: Advancement of Materials

Bidders are advised that **NO ADVANCEMENT OF MATERIALS**, as addressed in Subsection 109.06.2 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1902 LPA

CODE: (SP)

DATE: 02/26/2010

SUBJECT: Disadvantaged Business Enterprise (DBE) Forms

Anywhere in the plans, proposal and specifications where reference is made to Office of Civil Rights (OCR) Forms, it should be understood to mean Disadvantaged Business Enterprise (DBE) Forms.

The following are equivalent forms:

OCR-481	.....	OCR-481 LPA	.....	DBE-1
OCR-482	.....	OCR-482 LPA	.....	DBE-2
OCR-483	.....	OCR-483 LPA	.....	DBE-3
OCR-484	.....	OCR-484 LPA	.....	DBE-4
OCR-485	.....	OCR-485 LPA	.....	DBE-5
OCR-487	.....	OCR-487 LPA	.....	DBE-7

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 1928

CODE: (IS)

| DATE: 04/14/2008

SUBJECT: Federal Bridge Formula

Bidders are hereby advised that Federal Highway Administration Publication No. FHWA-MC-94-007, **BRIDGE FORMULA WEIGHTS**, dated January 1994, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration
400 7th Street, SW
Washington, DC 20590
(202) 366-2212

or

| http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc_page.htm

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2168

CODE: (SP)

DATE: 11/03/2008

SUBJECT: Fuel and Material Adjustments

Bidders are advised that **NO FUEL OR MATERIAL ADJUSTMENT**, as addressed in Subsection 109.07 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 2382

CODE: (IS)

| DATE: 02/12/2009

| SUBJECT: Status of Right-of-Way

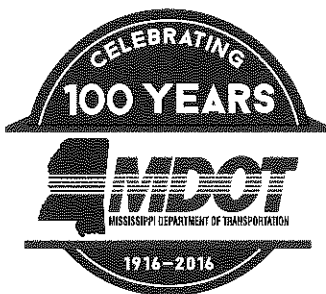
Although it is desirable to have acquired all rights-of-way and completed all utility adjustments and work to be performed by others prior to receiving bids, sometimes it is not considered to be in the public interest to wait until each and every such clearance has been obtained. The bidder is hereby advised of possible unacquired rights-of-way, relocatees and utilities which have not been completed.

| The status of right-of-way acquisition, utility adjustments, [encroachments](#), potentially contaminated sites [and asbestos containment](#) are set forth in [the following](#) attachments.

In the event right of entry is not available to ALL parcels of right-of-way and/or all work that is to be accomplished by others on the date set forth in the contract for the Notice to Proceed is not complete, the Department will issue a restricted Notice to Proceed.

Melinda L. McGrath
Executive Director

P. O. Box 1850
Jackson, MS 39215-1850
Telephone (601) 359-7001
FAX (601) 359-7110
GoMDOT.com



Mark C. McConnell
Deputy Executive Director/Chief Engineer
Lisa M. Hancock
Deputy Executive Director/Administration
Willie Huff
Director, Office of Enforcement
Charles R. Carr
Director, Office of Intermodal Planning

June 1, 2016

Mr. Andrew Hughes
Division Administrator
FHWA-Mississippi Division
100 West Capitol Street, Suite 1062
Jackson, MS 39269

RE: SRSP-7207-00(004) LPA
106877-401000
Safe Routes to School Project
City of Hattiesburg
Forrest County

RIGHT-OF-WAY CERTIFICATION

Dear Mr. Hughes:

This is to certify that all necessary highway rights-of-way, including control of access has been acquired or legal Right of Entry obtained and rights-of-way were acquired in accordance with 49CFR Part 24, **except** as indicated on the Status of Right of Way.

This is to further certify that all individuals and families have been relocated to decent, safe and sanitary housing, or comparable relocatees and the steps relative to relocation advisory assistance administration of the Highway Relocation Assistance Program have been taken, **except** as indicated on the attached Status of Right of Way.

All improvements have been removed from the highway right of way, **except** the improvements to be removed by the Contractor as indicated in the contract plans and as indicated on the attached Status of Improvements.

This project was inspected and there were no visible indications of any Potentially Contaminated Sites on proposed Right of Way, **except** as indicated on the attached Status of Potentially Contaminated Sites. The status of the utilities to be adjusted or relocated is shown in the report attached.

Mr. Andrew Hughes
June 1, 2016
Page 2

Attached:

Right of Way Status
Encroachment Certification
Hazardous Waste Status
Asbestos Abatement Status
Utility Status
Railroad Facilities Status Report

Sincerely,

RIGHT OF WAY DIVISION

A handwritten signature in black ink, appearing to read "Stephen D. Downing".

Stephen D. Downing
Assistant Division Administrator

SDD:ar

Attachments

Pc: Chief Engineer (65-01)
LPA Division (77-01)
Construction Engineer (73-01)
District Six (26-01)
Project Engineer (26-01 PE)
Facility & Maintenance (89-20)
Railroad Facilities Status Report

**STATUS OF RIGHT-OF-WAY
SRSP-7207-00(004) LPA
106877-401000
Safe Routes to School Project
FORREST COUNTY
June 1, 2016**

All rights of way and legal rights of entry have been acquired except:

Exceptions: MS Power poles at STA 26+80 and 30+25 will be designed around to avoid conflict.



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

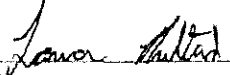
RIGHT OF WAY STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

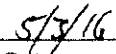
This is to certify that all necessary rights of way, including control of access rights (when pertinent), have been acquired, including legal and physical possession, for the above referenced project in accordance with Federal and State laws, including 49 CFR Part 24. All lands and improvements (if appropriate) are vacant, and the agency has physical possession and the right to enter upon all lands.

Furthermore, this is to certify that there were no individuals or families displaced by this project. Therefore, the 49 CFR Part 24, covering the relocation of displaced persons to decent, safe, and sanitary housing and availability of adequate replacement housing is not, applicable to this project. If persons were displaced, as a result of the project, all individuals and families have been moved from the ROW and relocated in accordance with 49 CFR Part 24.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Signature



Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

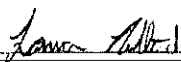
Council - Ward 5
Henry Naylor

ENCROACHMENT STATUS REPORT

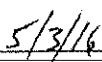
City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

This is to certify that based on a site inspection of the right of way for the project, the project right of way is clear of encroachments.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Signature



Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

HAZARDOUS WASTE STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

A physical inspection of the rights of way for this project reveals that there are no sites suspected of having any hazardous waste or underground storage tanks.

If there are suspected sites, these sites are identified and remediation plans are presented below.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

Lamar Rutland
Signature

5/3/16
Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

ASBESTOS ABATEMENT STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

This is to certify that the project does not contain structures that required asbestos abatement.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

Lamar Rutland
Signature

5/3/16
Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

UTILITY STATUS REPORT

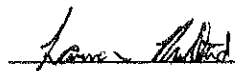
City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

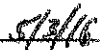
The following is a list of each utility owner on the above mentioned project, describing the status of each utility on the right of way and its impact on the project.

List of Each Utility Owner on the Project	Status of the Conflict with Project Construction
City of Hattiesburg – Water & Sewer	Not in conflict with construction schedule
AT&T	Not in conflict with construction schedule
MS Power	Not in conflict with construction schedule
Willmut Gas	Not in conflict with construction schedule
Comcast Cable	Not in conflict with construction schedule

The above named LPA understands that any claim by the contractor due to NOT having the utilities relocated will be a non-participating item. In the event the utility facilities are discovered to be in conflict, damaged, or otherwise impact the proposed construction, the above named LPA shall bear all responsibility and/or claims associated with these facilities.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg


Signature


Date

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Inter-Departmental Memorandum

TO: Mr. David Seyfarth
District LPA Engineer (16-10)

DATE: May 31, 2016

FROM: Mr. Jared Brogan
Hattiesburg Project Office (16-13)

SUBJECT OR PROJECT NO: SRSP-7207-00(004)LPA/106877-401000
SRTS-Hawkins Sidewalk Project
City of Hattiesburg

COUNTY: Forrest County

INFORMATION COPY TO:

Jeff Altman- State LPA Engineer (77-01)
Kelly Castleberry- District 6 Engineer (26-01)
Sharen Willis

Geoff Crosby-Neel-Schaffer
Lamar Rutland-City of Hattiesburg
Project File (16-13)

STATUS OF UTILITY RELOCATION WORK

AT&T: There are no known conflicts within the scope of this project.

City of Hattiesburg (Sewer & Water): There are no known conflicts within the scope of this project.

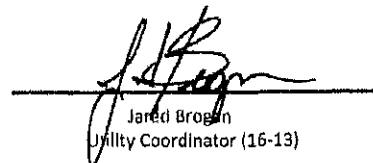
Comcast: There are no known conflicts within the scope of this project.

MS Power: There are no known conflicts within the scope of this project. Poles at station 26+80 and 30+25 will be designed around to avoid conflict.

Willmut Gas: There are no known conflicts within the scope of this project.

There are no other known utility conflicts at this time.

This is to certify that any required adjustments to facilities owned by the above mentioned utility companies have been completed to the best of my knowledge and are acceptable in accordance with the terms of the agreement between the owner and the LPA. Said adjustments are located within the limits of the above mentioned LPA project.



Jared Brogan
Utility Coordinator (16-13)



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

RAILROAD FACILITIES STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

There are no railroads facilities affected by the above referenced project.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

Lamar Rutland
Signature

5/3/16
Date

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4488 LPA

CODE: (IS)

DATE: 05/01/2013

SUBJECT: DBE Forms, Participation and Payment

Bidders are hereby advised that the participation of a DBE Firm cannot be counted towards the Prime Contractor's DBE goal until the amount being counted towards the goal has been paid to the DBE.

Form OCR-482-LPA has been developed to comply with this requirement. Bidders are hereby advised that at the end of the job, the Prime Contractor will submit this form to the Project Engineer before the final estimate is paid and the project is closed out. This form certifies payments to all DBE Subcontractors over the life of the contract.

Form OCR-484-LPA has also been developed to comply with this requirement. Bidders are hereby advised that each month, the Prime Contractors will submit this form to the Project Engineer no later than the last day of each month. This form certifies payments to all Subcontractors and shows all firms even if the Prime Contractor has paid no monies to the firm during that estimate period (negative report). The Project Engineer will attach this form to the monthly estimate before forwarding the estimate to the Local Public Agency (LPA) Division for processing.

Bidders are also advised that Form OCR-485-LPA will be completed by ALL BIDDERS submitting a bid proposal and must be signed and included in the bid proposal package. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

DBE Forms, including Forms OCR-482-LPA, OCR-484-LPA and OCR-485-LPA, can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at www.gomdot.com under *Business, Disadvantaged Enterprise, Applications and Forms for the DBE Program, MDOT Forms*.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4565

CODE: (SP)

DATE: 06/27/2013

SUBJECT: Manual on Uniform Traffic Control Devices

Any reference in the Standard Specifications or contract documents to a particular Section of the Manual on Uniform Traffic Control Devices (MUTCD) it shall mean that Section of the latest version of the Manual on Uniform Traffic Control Devices.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4566

CODE: (SP)

DATE: 07/02/2013

SUBJECT: DUNS Requirement for Federal Funded Projects

Bidders are advised that the Prime Contractor must maintain current registrations in the Central Contractor Registration (<http://www.sam.gov>) at all times during this project. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (<http://www.dnb.com>) is one of the requirements for registration in the Central Contractor Registration.

Bidders are also advised that the following information needs to be completed and included in the bid documents:

DUNS: 965044550

Company Name: Fairley Construction Services, Inc.

Company e-mail address: stephen@fairleyconstruction.com

By: [Signature]

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5053

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Contractor Correspondence

Bidders are advised that all correspondence concerning this project, other than correspondence related to the execution of the contract and sub-contracting, shall be sent to the Project Engineer. The Project Engineer will then forward any necessary correspondence to the appropriate Division. This includes general correspondence, submittals, shop drawings, requests for advancement of materials, etc.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO NOTICE TO BIDDERS NO. 5266 LPA

DATE: 11/15/2014

The goal is 3% percent for the Disadvantaged Business Enterprise. The low bidder is required to submit Form OCR-481 for all DBEs.

Delete the third paragraph under CONTRACT GOAL on page 2, and substitute the following.

The apparent lowest responsive bidder shall submit to the LPA Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, **no later than the 3rd business day after opening of the bids.**

LPA Projects: Delete entire Pre-Bid Section at the top of page 6.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5266

CODE: (IS)

| DATE: 11/12/2014

**SUBJECT: DISADVANTAGED BUSINESS ENTERPRISES IN FEDERAL-AID
HIGHWAY CONSTRUCTION**

This contract is subject to the "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations". Portions of the Act are set forth in this Notice as applicable to compliance by the Contractor and all of the Act, and the MDOT DBE Program, is incorporated by reference herein.

The Department has developed a Disadvantaged Business Enterprise Program that is applicable to this contract and is made a part thereof by reference.

Copies of the program may be obtained from:

Office of Civil Rights
Mississippi Department of Transportation
P. O. Box 1850
Jackson, Mississippi 39215-1850

POLICY

It is the policy of the Mississippi Department of Transportation to provide a level playing field, to foster equal opportunity in all federally assisted contracts, to improve the flexibility of the DBE Program, to reduce the burdens on small businesses, and to achieve that amount of participation that would be obtained in a non-discriminatory market place. In doing so, it is the policy of MDOT that there will be no discrimination in the award and performance of federally assisted contracts on the basis of race, color, sex, age, religion, national origin, or any handicap.

ASSURANCES THAT CONTRACTORS MUST TAKE

MDOT will require that each contract which MDOT signs with a sub-recipient or a Contractor, and each subcontract the Prime Contractor signs with a Subcontractor, includes the following assurances:

“The Contractor, subrecipient or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MDOT deems appropriate.”

DEFINITIONS

For purposes of this provision the following definitions will apply:

"Disadvantaged Business" means a small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individual(s) or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individual(s); and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individual(s) who own it. It is important to note that the business owners themselves must control the operations of the business. Absentee ownership or title ownership by an individual who does not take an active role in controlling the business is not consistent with eligibility as a DBE under CFR 49 Part 26.71.

CONTRACTOR'S OBLIGATION

The Contractor and all Subcontractors shall take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of a portion of the work in this contract and shall not discriminate on the basis of race, color, national origin, religion or sex. Failure on the part of the Contractor to carry out the DBE requirements of this contract constitutes a breach of contract and after proper notification the Department may terminate the contract or take other appropriate action as determined by the Department.

When a contract requires a zero percent (0%) DBE goal, the Contractor still has the responsibility to take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of the work in the contract. In this case, all work performed by a certified DBE firm is considered to be a "race neutral" measure and the Department will receive DBE credit towards the overall State goals when the DBE firm is paid for their work. If the Prime Contractor is a certified DBE firm, the Department can receive DBE credit only for the work performed by the Prime Contractor's work force or any work subcontracted to another DBE firm. Work performance by a non-DBE Subcontractor is not eligible for DBE credit.

CONTRACT GOAL

The goal for participation by DBEs is established for this contract in the attached Supplement. The Contractor shall exercise all necessary and reasonable steps to ensure that participation is equal to or exceeds the contract goal.

The percentage of the contract that is proposed for DBEs (1% or greater) shall be so stated on the last bid sheet of the proposal.

The apparent lowest responsive bidder shall submit to the Office of Civil Rights Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 3rd business day after opening of the bids.

Form OCR-481 is available on the MDOT website at GoMDOT.com, then Divisions, Civil Rights, Forms, DBE, MDOT Projects, or by calling 601-359-7466.

FORMS ARE AVAILABLE FROM THE OFFICE OF CIVIL RIGHTS

The OCR-481 Form must contain the following information:

The name and address of each certified DBE Contractor / Supplier;

The Reference Number, percent of work and the dollar amount of each item. If a portion of an item is subcontracted, a breakdown of that item including quantities and unit price must be attached, detailing what part of the item the DBE firm is to perform and who will perform the remainder of the item.

If the DBE Commitment shown on the last bid sheet of the proposal, does not equal or exceed the contract goal, the bidder must submit, with the proposal, information to satisfy the Department that adequate good faith efforts have been made to meet the contract goal.

Failure of the lowest bidder to furnish acceptable proof of good faith efforts, submitted with the bid proposal, shall be just cause for rejection of the proposal. Award may then be made to the next lowest responsive bidder or the work may be readvertised.

The following factors are illustrative of matters the Department will consider in judging whether or not the bidder has made adequate good faith effort to satisfy the contract goal.

- (1) Whether the bidder attended the pre-bid meeting that was scheduled by the Department to inform DBEs of subcontracting opportunities;
- (2) Whether the bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
- (3) Whether the bidder provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;
- (4) Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested;
- (5) Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goal;
- (6) Whether the bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
- (7) Whether the bidder negotiated in good faith with interested DBEs and did not reject them as unqualified without sound reasons based on a thorough investigation of their capabilities; and

- (8) Whether the bidder made efforts to assist interested DBEs in obtaining any required bonding or insurance.
- (9) Whether the bidder has written notification to certified DBE Contractors soliciting subcontracting for items of work in the contract.
- (10) Whether the bidder has a statement of why an agreement was not reached.

The bidder's execution of the signature portion of the proposal shall constitute execution of the following assurance:

The bidder hereby gives assurance pursuant to the applicable requirements of "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations" that the bidder has made a good faith effort to meet the contract goal for DBE participation for which this proposal is submitted.

DIRECTORY

A list of "Certified DBE Contractors" which have been certified as such by the Mississippi Department of Transportation and other Unified Certification Partners (UPC) can be found on the Mississippi Department of Transportation website at www.gomdot.com. The DBE firm must be certified at the time the project is let and approved by MDOT to count towards meeting the DBE goal.

REPLACEMENT

If a DBE Subcontractor cannot perform satisfactorily, and this causes the OCR-481 commitment to fall below the contract goal, the Contractor shall take all necessary reasonable steps to replace the DBE with another certified DBE Subcontractor or submit information to satisfy the Mississippi Department of Transportation that adequate good faith efforts have been made to replace the DBE. The replacement DBE must be a DBE who was on the Department's list of "Certified DBE Contractors" when the job was let, and who is still active. All DBE replacements must be approved by the Department.

Under no circumstances shall the Prime or any Subcontractor perform the DBE's work (as shown on the OCR-481) without prior written approval from the Department. See "Sanctions" at the end of this document for penalties for performing DBE's work.

When a Contractor proposes to substitute/replace/terminate a DBE that was originally named on the OCR-481, the Contractor must obtain a release, in writing, from the named DBE explaining why the DBE Subcontractor cannot perform the work. A copy of the original DBE's release must be attached to the Contractor's written request to substitute/replace/terminate along with appropriate Subcontract Forms for the substitute/replacement/terminated Subcontractor, all of which must be submitted to the DBE Coordinator and approved, in advance, by MDOT.

GOOD FAITH EFFORTS

To demonstrate good faith efforts to replace any DBE that is unable to perform successfully, the Contractor must document steps taken to subcontract with another certified DBE Contractor. Such documentation shall include no less than the following:

- (1) Proof of written notification to certified DBE Contractors by certified mail that their interest is solicited in subcontracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.
- (2) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (3) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (4) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (5) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (6) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (7) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (8) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

Failure of the Contractor to demonstrate good faith efforts to replace a DBE Subcontractor that cannot perform as intended with another DBE Subcontractor, when required, shall be a breach of contract and may be just cause to be disqualified from further bidding for a period of up to 12 months after notification by certified mail.

PRE-BID MEETING

A pre-bid meeting will be held in Amphitheater 1 & 2 of the Hilton Jackson located at I-55 and County Line Road, Jackson, Mississippi at 2:00 P.M. on the day preceding the date of the bid opening.

This meeting is to inform DBE firms of subcontracting and material supply opportunities. Attendance at this meeting is considered of prime importance in demonstrating good faith effort to meet the contract goal.

PARTICIPATION / DBE CREDIT

Participation shall be counted toward meeting the goal in this contract as follows:

- (1) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (2) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (3) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (4) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (5) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (6) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (7) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

AWARD

Award of this contract to the low bidder will be contingent upon the following conditions:

- (1) Concurrence from Federal Highway Administration, when applicable.
- (2) Bidder must submit to the Office of Civil Rights for approval, Form OCR-481 (DBE Commitment) no later than the 3rd business day after opening of the bids, or submit information with the bid proposal to satisfy the Department and that adequate good faith efforts have been made to meet the contract goal. For answers to questions regarding Form OCR-481, contact the MDOT Office of Civil Rights at (601) 359-7466.
- (3) Bidder must submit an OCR-485 listing all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. Form OCR-485 must be signed and submitted with the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

Prior to the start of any work, the bidder must notify the Project Engineer, in writing, of the name of the designated "DBE Liaison Officer" for this project. This notification must be posted on the bulletin board at the project site.

DEFAULT

The contract goal established by MDOT in this proposal of 1% or greater must be met to fulfill the terms of the contract. The Contractor may list DBE Subcontractors and items that exceed MDOT's contract goal, but should unforeseen problems arise that would prevent a DBE from completing its total commitment percentage, the Contractor will meet the terms of the contract as long as it meets or exceeds MDOT's Contract Goal. For additional information, refer to "Replacement" section of this Notice.

DBE REPORTS

- (1) OCR-481: Refer to "CONTRACT GOAL" section of this Notice to Bidders for information regarding this form.
- (2) OCR-482: At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form OCR-482 whereby the Contractor certifies to the amounts of payments made to each Contractor / Supplier. The Project Engineer shall submit the completed Form OCR-482 to the DBE Coordinator (Office of Civil Rights). Final acceptance of the project is dependent upon Contract Administration Division's receipt of completed Form OCR-482 which they will receive from the Office of Civil Rights.
- (3) OCR-483: The Project Engineer/Inspector will complete Form OCR-483, the Commercially Useful Function (CUF) Performance Report, in accordance with MDOT

S.O.P. No. OCR-03-09-01-483. Evaluations reported on this form are used to determine whether or not the DBE firm is performing a CUF. The Prime Contractor should take corrective action when the report contains any negative evaluations. DBE credit may be disallowed and/or other sanctions imposed if it is determined the DBE firm is not performing a CUF. This form should also be completed and returned to the DBE Coordinator (Office of Civil Rights).

- (4) OCR-484: Each month, the Contractor will submit to the Project Engineer OCR-484 certifying payments to all Subcontractors. This OCR-484 will be attached to the monthly estimate for further processing. Failure of the Contractor to submit the OCR-484 will result in the estimate not being processed or paid.
- (5) OCR-485: Bidder must submit signed form with bid proposal of all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.
- (6) OCR-487: Only used by Prime Contractors that are certified DBE firms. This form is used in determining the exact percentage of DBE credit for the specified project. It should be returned to MDOT with the OCR-481 form, or can also be returned with the Permission to Subcontract Forms (CAD-720, CAD-725 and CAD-521).

SANCTIONS

The Department has the option to enforce any of the following penalties for failure of the Prime Contractor to fulfill the DBE goal as stated on the OCR-481 form or any violations of the DBE program guidelines:

- (1) Disallow credit towards the DBE goal
- (2) Withhold progress estimate payments
- (3) Deduct from the final estimate or recover an amount equal to the unmet portion of the DBE goal which may include additional monetary penalties as outlined below based on the number of offenses and the severity of the violation as determined by MDOT.

1 st Offense	10% of unmet portion of goal	or	\$5,000 lump sum payment	or	Both
2 nd Offense	20% of unmet portion of goal	or	\$10,000 lump sum payment	or	Both
3 rd Offense	40% of unmet portion of goal	or	\$20,000 lump sum payment	or	\$20,000 lump sum payment and debarment
- (4) Debar the Contractor involved from bidding on Mississippi Department of Transportation projects.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5405

CODE: (SP)

| DATE: 02/11/2015

SUBJECT: Traffic Control Devices

Bidders are advised of the following two changes regarding traffic control devices.

Flashing Arrow Panels

| In Subsection 619.02.5 of the Standard Specifications, it states that flashing arrow panels shall meet the requirements of Section 6F.53 of the MUTCD. The new MUTCD has changed this reference to Section 6F.61. Flashing arrow panels on this project must meet the requirements of Section 6F.61 of the latest MUTCD.

Type III Barricade Rails

The use of 2-inch nominal thickness timber for rails on Type III barricades has not been approved by NCHRP as a crashworthy device. Therefore, the use of 2-inch nominal thickness timbers will not be allowed for rails on Type III Barricades. Timber rails for Type III Barricades shall be as follows.

- For barricades up to four feet (4') wide, the maximum thickness of timber rails shall be one inch (1") and the material shall be pine timber or ¾-inch ACX plywood.
- For barricades more than four feet (4') wide, timber rails shall be constructed of ¾-inch ACX plywood.

A list of crashworthy Type III Barricades can be found at the below FHWA website.

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5412

CODE: (SP)

DATE: 02/18/2015

SUBJECT: Weight Limits

Bidders are hereby advised that all trucks hauling materials to and from this project shall comply with the legal weight limits as established by law. MDOT will not compensate the Contractor for any portion of a load delivered to the project in excess of the legal limit for that truck.

Vehicles relying on harvest permits are limited to hauling only those materials set forth in Section 27-19-81(4) of the Mississippi Code, as amended.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5865 LPA

CODE: (SP)

DATE: 11/30/2015

SUBJECT: Sampling and Testing of Concrete on Small LPA Projects

Bidders are advised that the following concrete items will be tested at a reduced amount and will not be accepted based on the Quality Control / Quality Assurance (QC/QA) requirements of Section 804 of the specifications.

<u>Section</u>	<u>Description</u>
221	Paved Ditches
601	Minor Structures - manholes, inlets, catch basins, junction boxes, pipe headwalls, and pipe collars.
605	Edge Drain and Underdrain Outlet Pads
606	Guardrail Anchors
607	Fence Post Footings
608	Sidewalks
609	Curb and Gutter
614	Driveways
616	Median and Island Pavement
630	Sign Footings, except Overhead Sign Supports

The material requirements for the above pay items are as follows:

1. Cement and aggregates for concrete items shall be from approved sources. Concrete shall be produced from a concrete batch plant which has a current plant calibration. The Project Engineer shall furnish plant inspection as deemed necessary for control. The producer shall furnish with each load of concrete a delivery ticket containing the following information:
 - a. Project Number
 - b. Class Concrete
 - c. Weight of Cement
 - d. Free Water in Aggregate (gallons)
 - e. Weight of Fine Aggregate
 - f. Weight of Coarse Aggregate
 - g. Water in Mix (gallons)
 - h. Number of Revolutions Mixed
 - i. Time of Batching
2. The Contractor is required to submit mix designs to accomplish this work in accordance with Section 804.
3. A set of three cylinders, slump test, and air test will be performed on the first day of production for each mix design. The compressive strength test shall be the average of three cylinders.
4. An additional set of cylinders, slump test, and air test will be performed at a minimum of rate of one per 100 cubic yards of mix produced.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5866 LPA

CODE: (SP)

| DATE: 10/28/2015

SUBJECT: Payroll Requirements

Bidders are hereby advised that the Contractor and Subcontractor(s) are required to submit payroll information to the Project Engineers on a weekly basis.

On Federal-Aid Projects, LPA-880, LPA-881 and certified payroll submissions are required each week the Contractor or a Subcontractor performs work on the project. This is addressed in Section IV of Form FHWA-1273.

On State-Funded Projects, LPA-880 is required each week the Contractor or a Subcontractor performs work on the project.

| When no work is performed on either Federal-Aid or State-Funded Projects, the Contractor should only submit LPA-880 showing no work activities.

The Contractor shall make all efforts necessary to submit this information to the Project Engineer in a weekly manner. The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to submit the required information. Submission of forms and payrolls shall be current through the first full week of the month for the estimate period in order for the Project Engineer to process an estimate.

Bidders are advised to review the requirements regarding payroll submissions in Section 110 of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 7001

CODE: (SP)

DATE: 1/7/2015

SUBJECT: Contract Time

PROJECT:

The completion of work to be performed by the Contractor for this project will not be a specified date but shall be when all allowable working days are assessed, or any extension thereto as provided in Subsection 907-108.06.

The Notice of Award will be issued within 60 days of the bid opening date and the effective date of the Notice to Proceed / Beginning of Contract Time Date will be within one months following the Date of the Notice of Execution of Contract Letter.

The Contractor shall request a Notice to Proceed / Beginning of Contract Time Date after receiving the Notice of Execution of Contract Letter and the date requested should be within the one month period following the Date of the Notice of Execution of Contract Letter.

Should the Contractor not request a Notice to Proceed Date within the one months allowed, the date for the Notice to Proceed / Beginning of Contract Time will be one months after the Date of the Notice of Execution of Contract Letter.

44 Working Days have been allowed for the completion of work on this project.

A Preconstruction Conference as required by Subsection 907-108.03.2 should be held prior to commencement of any field work by the Contractor.

General Decision Number: MS160235 04/08/2016 MS235

Superseded General Decision Number: MS20150235

State: Mississippi

Construction Type: Highway

County: Forrest County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	04/08/2016

* ELEC0903-006 12/01/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 25.30	12.5%+4.00

SUMS2010-054 08/04/2014

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 12.00	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 11.54	1.63
HIGHWAY/PARKING LOT STRIPING:		
Truck Driver (Line Striping		
Truck).....	\$ 14.55	0.00
INSTALLER - SIGN.....	\$ 12.19	0.00
INSTALLER: Guardrail.....	\$ 12.39	0.00
IRONWORKER, REINFORCING.....	\$ 16.44	0.00
LABORER: Common or General,		
Including Asphalt Raking,		
Shoveling, Spreading.....	\$ 10.34	0.00
LABORER: Flagger.....	\$ 11.42	0.00
LABORER: Grade Checker.....	\$ 14.82	0.00
LABORER: Luteman.....	\$ 12.88	0.00

LABORER: Mason Tender -		
Cement/Concrete.....	\$ 10.57	0.00
LABORER: Pipelayer.....	\$ 14.50	0.00
LABORER: Laborer-Cones/ Barricades/Barrels -		
Setter/Mover/Sweeper.....	\$ 12.17	0.00
OPERATOR: Asphalt Spreader.....	\$ 14.71	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 14.20	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 11.86	0.00
OPERATOR: Broom/Sweeper.....	\$ 10.94	0.00
OPERATOR: Bulldozer.....	\$ 13.99	0.00
OPERATOR: Concrete Saw.....	\$ 13.93	0.00
OPERATOR: Crane.....	\$ 14.80	0.00
OPERATOR: Distributor.....	\$ 11.46	0.00
OPERATOR: Grader/Blade.....	\$ 16.09	0.00
OPERATOR: Loader.....	\$ 13.99	0.00

OPERATOR: Mechanic.....	\$ 13.00	0.00
OPERATOR: Milling Machine.....	\$ 16.96	0.00
OPERATOR: Oiler.....	\$ 12.22	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 11.56	0.00
OPERATOR: Roller (All Types)....	\$ 12.17	0.00
OPERATOR: Scraper.....	\$ 14.00	0.00
OPERATOR: Tractor.....	\$ 12.00	0.00
SURVEYOR (Staking, Marking and Brush Clearing).....	\$ 11.56	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 14.72	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 14.18	0.00
TRUCK DRIVER: Mechanic.....	\$ 12.31	0.00
TRUCK DRIVER: Water Truck.....	\$ 17.08	0.00
TRUCK DRIVER: Dump Truck (All Types).....	\$ 11.58	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 14.36	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of

the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material,

etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

SUPPLEMENT TO FORM FHWA-1273

DATE: 01/06/2016

SUBJECT: Final Certificate and Contract Provisions for Subcontracts

All subcontracts shall be in writing and contain all pertinent provisions and requirements of the prime contract.

Each "Request for Permission to Subcontract" (Mississippi Department of Transportation Form CAD-720) shall include a copy of subcontract upon request for review by the Mississippi Department of Transportation. The federal contract provisions may be omitted from the subcontract copy submitted for review provided the Contractor certifies that the provisions will be physically incorporated into the agreement furnished to the Subcontractor.

In lieu of submitting a copy of the subcontract for review, the Contractor may certify that the subcontract agreement is in writing and that it contains all the requirements and pertinent provisions of the prime contract.

Each Subcontractor will be required to provide a copy of the subcontract agreement for contract compliance reviews, along with physical evidence (copy of FHWA-1273) that requirements and pertinent provisions have been provided for review and adherence.

The Contractor is hereby advised of the requirements set forth in the following Attachment (Title 46 - Shipping) as it pertains to the implementation of Cargo Preference Act (CPA) requirements in the Federal-aid Highway Program.

By signing this contract, the Contractor agrees to conform to the requirements of the CPA.

Attachment

Title 46- Shipping

Volume: 8

Date: 2014-10-01

Original Date: 2014-10-01

Title: Section 381.7 - Federal Grant, Guaranty, Loan and Advance at Funds Agreements.

Context: Title 46- Shipping. CHAPTER II- MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTATION. SUBCHAPTER J - MISCELLANEOUS. PART 381 - CARGO PREFERENCE-U.S.- FLAG VESSELS.

§ 381.7 Federal Grant, Guaranty, Loan and Advance of Funds Agreements.

In order to insure a fair and reasonable participation by privately owned United States-flag commercial vessels in transporting cargoes which are subject to the Cargo Preference Act of 1954 and which are generated by U.S. Government Grant, Guaranty, Loan and/or Advance of Funds Programs, the head of each affected department or agency shall require appropriate clauses to be inserted in those Grant, Guaranty, Loan and/or Advance of Funds Agreements and all third party contracts executed between the borrower/grantee and other parties, where the possibility exists for ocean transportation of items procured, contracted for or otherwise obtained by or on behalf of the grantee, borrower, or any of their contractors or subcontractors. The clauses required by this part shall provide that at least 50 percent of the freight revenue and tonnage of cargo generated by the U.S. Government Grant, Guaranty, Loan or Advance of Funds be transported on privately owned United States-flag commercial vessels. These clauses shall also require that all parties provide to the Maritime Administration the necessary shipment information as set forth in § 381.3. A copy of the appropriate clauses required by this part shall be submitted by each affected agency or department to the Secretary, Maritime Administration, for approval no later than 30 days after the effective date of this part. The following are suggested acceptable clauses with respect to the use of United States-flag vessels to be incorporated in the Grant, Guaranty, Loan and/or Advance of Funds Agreements as well as contracts and subcontracts resulting therefrom:

(a) *Agreement Clauses.* "Use of United States-flag vessels:

"(1) Pursuant to Pub. L 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

"(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees --

"(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

"(2) To furnish within 20 days following the date of loading for shipments originating within the United

States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

"(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract."

(Reorganization Plans No.21 of 1950(64 Stat. 1273) and No. 7 of 1961 (75 Stat. 840) as amended by Pub. L 91.469 (84 Stat 1036) and Department of Commerce Organization Order 10-8 (38 FR 19707, July 23, 1973)) (42 FR 57126, Nov. 1, 1977]

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goal for female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work, is 6.9%.

Until further notice	Goals for minority participation for each trade (percent)
SHSA Cities:	
Pascagoula - Moss Point -----	16.9
Biloxi - Gulfport -----	19.2
Jackson -----	30.3
SMSA Counties:	
Desoto -----	32.3
Hancock, Harrison, Stone-----	19.2
Hinds, Rankin -----	30.3
Jackson -----	16.9
Non-SMSA Counties:	
George, Greene-----	26.4
Alcorn, Benton, Bolivar, Calhoun, Carroll, Chickasaw, Clay, Coahoma, Grenada, Itawamba, Lafayette, Lee, Leflore, Marshall, Monroe, Montgomery, Panola, Pontotoc, Prentiss, Quitman, Sunflower, Tallahatchie, Tate, Tippah, Tishomingo, Tunica, Union, Washington, Webster, Yalobusha -----	
	26.5
Attala, Choctaw, Claiborne, Clarke, Copiah, Covington, Franklin, Holmes, Humphreys, Issaquena, Jasper, Jefferson, Jefferson Davis, Jones Kemper, Lauderdale, Lawrence, Leake, Lincoln, Lowndes, Madison, Neshoba, Newton, Noxubee, Oktibbeha, Scott, Sharkey, Simpson, Smith, Warren, Wayne, Winston, Yazoo-----	
	32.0
Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall-----	
	27.7
Adams, Amite, Wilkinson -----	30.4

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4.2(d). Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is to the county and city (if any), stated in the advertisement.

5. The notification required in Paragraph 3 shall be addressed to the following:

Contract Compliance Officer
Mississippi Department of Transportation
P.O. Box 1850
Jackson, Mississippi 39215-1850

(06/28/2012)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-101-4

CODE: (IS)

DATE: 11/05/2008

SUBJECT: Definitions

Section 101, Definitions and Terms, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-101.02--Definitions. Replace the following definitions in Subsection 101.02 on pages 3 through 13.

Contract - The written agreement between the Mississippi Transportation Commission and the Contractor setting forth the obligations of the parties thereunder, including but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract includes the invitation for bids, proposal, contract form and contract bonds, specifications, supplemental specifications, interim specifications, general and detailed plans, special provisions, notices to bidders, notice to proceed, and also any agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

Contract Bonds - The approved form of security, executed by the Contractor and the Contractor's Surety(ies), guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the project. This term includes Performance and Payment Bond(s).

Surety - A corporate body, qualified under the laws of Mississippi, which is bound with and for the successful bidder by "contract bond(s)" to guarantee acceptable performance of the contract and payment of all legal taxes and debts pertaining to the construction of the project, including payment of State Sales Tax as prescribed by law, and any overpayment made to the Contractor.

Add the following to the list of definitions in Subsection 101.02 on pages 3 through 13.

Performance Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing satisfactory completion of the contract and all supplemental agreements pertaining thereto.

Payment Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing the payment of all legal debts pertaining to the construction of the project including, but not limited to, the labor and materials of subcontractors and suppliers to the prime contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-4 LPA

CODE: (SP)

DATE: 04/29/2014

SUBJECT: Bidding Requirements and Conditions

907-102.06--Preparation of Proposal. Delete the fifth, sixth, seventh, eighth, and ninth paragraphs of Subsection 102.06 on page 18.

907-102.08--Proposal Guaranty. Delete the two paragraphs in Subsection 102.08 on page 20 and substitute the following:

No proposal will be considered unless accompanied by certified check, cashier's check or bid bond, made payable to the LPA listed in the contract, in an amount of not less than five percent (5%) of the total amount of the proposal offered. The guaranty shall be evidence of good faith that, if awarded the contract, the bidder will execute the contract and give performance and payment contract bond(s) as stipulated in Subsection 907-103.05.1, 907-103.05.2, and as required by law.

If a bid bond is offered as guaranty, the bond must be on a form approved by the Chief LPA Official, made by a Surety acceptable to the Chief LPA Official and signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent and the Bidder. Such bid bond shall also conform to the requirements and conditions stipulated in Subsection 907-103.05.2 as applicable.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-103-11

CODE: (SP)

| DATE: 07/22/2015

SUBJECT: Award and Execution of Contract

Section 103, Award and Execution of Contract, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-103.04--Return of Proposal Guaranty. Delete the second paragraph of Subsection 103.04 on page 23 and substitute the following:

Certified checks or cashier's checks submitted as proposal guaranties, except those of the two lowest bidders, will be returned within 10 days of contract award. The retained proposal guaranty of the unsuccessful of the two lowest bidders will be returned within ten days following the execution of a contract with the successful low bidder. The retained proposal guaranty of the successful bidder will be returned after satisfactory performance and payment bonds have been furnished and the contract has been executed.

In the event all bids are rejected by the Commission, certified checks or cashier's checks submitted as proposal guaranty by all bidders will be returned within 10 days of rejection.

Delete Subsection 103.05 on page 23 and substitute the following:

907-103.05--Contract Bonds.

907-103.05.1--Requirement of Contract Bonds. Prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director a performance and payment bond(s), in a sum equal to the full amount of the contract as a guaranty for complete and full performance of the contract and the protection of the claimants and the Department for materials and equipment and full payment of wages in accordance with Section 65-1-85 Miss. Code Ann. (1972 as amended). In the event of award of a joint bid, each individual, partnership, firm or corporation shall assume jointly the full obligations under the contract and the contract bond(s).

907-103.05.2--Form of Bonds. The form of bond(s) shall be that provided by or acceptable to the Department. These bonds shall be executed by a Mississippi agent or qualified nonresident agent and shall be accompanied by a certification as to authorization of the attorney-in-fact to commit the Surety company. A power of attorney exhibiting the Surety's original seal supporting the Mississippi agent or the qualified nonresident agent's signature shall be furnished with each bond. The Surety company shall be currently authorized and licensed in good standing to conduct business in the State of Mississippi with a minimum rating by A.M. Best of (A-) in the latest printing "Best's Key Rating Guide" to write individual bonds up to ten percent of the policy holders' surplus or listed on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as

published by the United States Department of the Treasury, Financial Management Service, Circular 570 (latest revision as published and supplemented on the Financial Management Service Web site and in the Federal Register) within the underwriting limits listed for that Surety. The Mississippi agent or qualified nonresident agent shall be in good standing and currently licensed by the Insurance Commissioner of the State of Mississippi to represent the Surety company(ies) executing the bonds.

Surety bonds shall continue to be acceptable to the Commission throughout the life of the Contract and shall not be canceled by the Surety without the consent of the Department. In the event the Surety fails or becomes financially insolvent, the Contractor shall file a new Bond in the amount designated by the Executive Director within thirty (30) days of such failure, insolvency, or bankruptcy. Subsequent to award of Contract, the Commission or the Department may require additional security for any supplemental agreements executed under the contract or replacement security in the event of the surety(ies) loss of the ratings required above. Suits concerning bonds shall be filed in the State of Mississippi and adjudicated under its laws without reference to conflict of laws principles.

907-103.08--Failure to Execute Contract. In the first sentence of Subsection 103.08 on page 24, change “bond” to “performance and payment bonds”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-104-5

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Scope of Work

Section 104, Scope of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-104.05--Removal and Disposal of All Materials From the Project. Delete the second sentence of the first full paragraph of Subsection 104.05 on page 30 and substitute the following:

The Contractor shall also furnish the Engineer a certified letter stating that the area of disposal is not in a wetland or in Waters of the U.S.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-105-8

CODE: (SP)

DATE: 11/20/2014

SUBJECT: Control of Work

Section 105, Control of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is modified as follows.

907-105.04--Coordination of Plans, Specifications, Interim Specifications, Special Provisions and Notice to Bidders. Delete the second full paragraph of Subsection 105.04 on page 35, and substitute the following.

In case of a conflict between plan quantities, advertisement quantities, and/or bid sheet quantities, the bid sheet quantities shall prevail.

907-105.05--Cooperation by Contractor. Delete Subsection 105.05 on page 35 and substitute the following.

907-105.05--Cooperation by Contractor. The Contractor shall give the work the attention necessary to expedite its progress, and shall cooperate with the Engineer, inspectors and other Contractors in every possible way.

907-105.05.1--Project Superintendent. The Contractor shall have a competent and experienced full time resident superintendent who is capable of reading and understanding the plans and specifications for the particular work being performed. The superintendent shall be on the project site at any time work is being performed by the Prime Contractor or any Subcontractors. The superintendent shall advise the Project Engineer of an intended absence from the work and designate a person to be in charge of the work during such absence. The superintendent shall receive instructions from the Engineer or authorized representative. Upon issuance of the Notice to Award, the Contractor or duly appointed agent authorized to bind the Contractor shall file with the Executive Director the name and address of the superintendent who will supervise the work with copies to the Construction Engineer, Contract Administration Engineer, District Engineer and Project Engineer. The Executive Director shall be immediately notified in writing with copies to those stated when a change is made in the Contractor's superintendent or superintendent's address. The superintendent shall have full authority to execute orders or directives of the Engineer without delay and to promptly supply materials, equipment, labor and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet.

907-105.05.2--Certified Erosion Control Person. On projects that require an erosion control plan, the Contractor shall also designate a responsible person whose primary duty shall be to monitor and maintain the effectiveness of the erosion control plan, including NPDES permit

requirements. This responsible person must be a Certified Erosion Control Person certified by an organization approved by the Department. Prior to or at the pre-construction conference, the Contractor shall designate in writing the Certified Erosion Control Person to the Project Engineer. The designated Certified Erosion Control Person shall be assigned to only one (1) project. When special conditions exist, such as two (2) adjoining projects or two (2) projects in close proximity, the Contractor may request in writing that the State Construction Engineer approve the use of one (1) Certified Erosion Control Person for both projects. The Contractor may request in writing that the Engineer authorize a substitute Certified Erosion Control Person to act in the absence of the Certified Erosion Control Person. The substitute Certified Erosion Control Person must also be certified by an organization approved by the Department. A copy of the Certified Erosion Control Person's certification must be included in the Contractor's Protection Plan as outlined in Subsection 907-107.22.1. This in no way modifies the requirements regarding the assignment and availability of the superintendent.

907-105.14--Maintenance During Construction. Before the first sentence Subsection 105.14 on page 39, add the following.

The Contractor will be responsible for the maintenance of existing roadways within the limits of this project starting on the date of the Notice To Proceed / Beginning of Contract Time. Anytime work is performed in a travel lane, the Contractor shall install portable lane closure signs meeting the requirement of the MDOT Standard Drawing or MUTCD.

907-105.16--Acceptance. Delete Subsection 105.16 on pages 40 and 41, and substitute the following.

907-105.16--Acceptance.

907-105.16.1--Partial Acceptance of a Unit. When the Contractor has completed a unit of the work such as an interchange, a structure, a portion of the road or pavement or one project of a multi-project contract, the Contractor may request the Engineer to make a final inspection of that unit; or the Executive Director may order a final inspection of the unit if it is in the public's interest. If the Engineer finds upon inspection that the unit has been completed in compliance with the contract and it is a complete facility which can be made available to the public or made available for the prosecution of work under another contract, the Executive Director may conditionally accept the unit and conditionally relieve the Contractor of certain contractual responsibilities as defined in the release.

In the event items of work covered by such release are found to be defective or deficient as evidenced by unsatisfactory test reports of materials incorporated in the work or other engineering determination, the release shall terminate upon written notification to the Contractor. The Contractor shall make all corrections, restorations, constructions or reconstructions deemed necessary and shall resume all contractual responsibilities until all corrective measures have been made in accordance with the terms of the contract.

Partial acceptance does not constitute final acceptance of the work, or any part thereof, nor in any way void or alter any of the terms of the contract.

Relief from "certain contractual responsibilities" as indicated herein may, or may not, include:

- (a) Further maintenance of the defined limits of the partially accepted work.
- (b) Further public liability for the defined limits of the partially accepted work.
- (c) Further liability for liquidated damages as applicable to the value of the partially accepted work when the quantities for the partially accepted work are separate quantities listed on the Summary of Quantities sheet of the plans, and the separate quantities and the total amounts thereof are listed on the Engineer's Estimate. Otherwise, no reduction in liquidated damages will be made because of such partial acceptance.

Unless specifically provided in the contract, the liability for liquidated damages shall not be reduced to less than that applicable under the contract for an amount of such work equal to at least fifty percent (50%) of the total amount of work under the contract.

907-105.16.2--Partial Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection.

If the inspection discloses any work as being unsatisfactory or incomplete, the Engineer will discuss in detail with the Contractor all discrepancies in the work. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed.

However, if during the final inspection the Engineer determines that all work has been satisfactorily completed save that of growth and coverage of plant establishment on all or part of the work, the Engineer may recommend partial release of all work except items related to growth and coverage. Upon such recommendation, the Contractor will be given a partial release of maintenance and shall be released from further contractual liabilities for the completed work. The Contractor will retain responsibility for plant establishment and all maintenance and repairs appurtenant thereto until satisfactory growth and coverage is achieved.

907-105.16.3--Final Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection. If all work provided by the contract has been completed to the Engineer's satisfaction, the inspection will constitute the final inspection, and the Engineer will conditionally release the Contractor of maintenance.

As provided in the contract, in the event items of work are found to be deficient or defective as evidenced by unsatisfactory test reports of material incorporated into the work, the Contractor shall assume full responsibility for corrective measures, and shall reassume maintenance and public liability until such corrective measures are completed to the satisfaction of the Engineer.

907-105.16.4.--Final Acceptance of a Project. Upon evidence that the Contractor has fulfilled all obligations under the contract, the Executive Director will make final acceptance and notify the Contractor in writing. Final acceptance of the project will not be given until all obligations imposed under the contract, including but not limited to the final reporting of payrolls, final reporting of DBE payments, acceptable certifications and test reports of materials used, etc., have been fulfilled.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-107-13

DATE: 11/17/2015

SUBJECT: Permits, Licenses and Taxes

After the second paragraph of Subsection 907-107.02 on page 1, add the following.

Prior to commencing work on any Project, the Contractor shall obtain a Material Purchase Certificate number (MPC#) from the Mississippi Department of Revenue, pursuant to Miss. Code Ann. § 27-65-21, and Miss. Admin. Code 35.IV.10.01. Upon receipt of the MPC#, the Contractor must immediately provide the MPC# to the Contract Administration Division of the Department. Failure to obtain and submit a MPC# prior to commencing work shall result in the withholding of payment to the Contractor until such time that a MPC# is obtained and submitted to the Department.

Delete the last sentence of the last paragraph of Subsection 907-107.02 on page 1, and substitute the following.

The Department will notify the Mississippi Department of Revenue of the names and addresses of any Contractors or Subcontractors.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-107-13

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Legal Relations and Responsibility to Public

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-107.02--Permits, Licenses and Taxes. Delete in toto Subsection 107.02 on page 49 and substitute the following.

The Contractor or any Subcontractor shall have the duty to determine any and all permits and licenses required and to procure all permits and licenses, pay all charges, fees and taxes and issue all notices necessary and incidental to the due and lawful prosecution of the work. At any time during the life of this contract, the Department may audit the Contractor's or Subcontractor's compliance with the requirements of this section.

The Contractor or any Subcontractor is advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq. and the Mississippi Use Tax Law, Section 27-67-1, et seq., and their requirements and penalties, apply to any contract or subcontract for construction, reconstruction, maintenance or repairs, for contracts or subcontracts entered into with the State of Mississippi, any political subdivision of the State of Mississippi, or any Department, Agency, Institute of the State of Mississippi or any political subdivision thereof.

The Contractor or any Subcontractor will be subject to one or more audits by the Department during the life of this contract to make certain that all applicable fuel taxes, as outlined in Section 27-55-501, et seq., and any sales and/or use taxes, as outlined in Section 27-67-1, et seq. are being paid in compliance with the law. The Department will notify the Mississippi State Tax Commission of the names and addresses of any Contractors or Subcontractors.

907-107.14--Damage Claims and Insurance.

| **907-107.14.2--Liability Insurance.** Delete Subsection 107.14.2 beginning on page 60 and substitute the following.

907-107.14.2.1--General. The Contractor shall carry Contractor's liability, including subcontractors and contractual, with limits not less than: \$500,000 each occurrence; \$1,000,000 aggregate; automobile liability - \$500,000 combined single limit - each accident; Workers' Compensation and Employers' Liability - Statutory & \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. Each policy shall be signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent of the Insurance Company.

The Contractor shall have certificates furnished to the Department from the insurance companies providing the required coverage. The certificates shall be on the form furnished by the Department and will show the types and limits of coverage.

907-107.14.2.2--Railroad Protective. The following provisions are applicable to all work performed under a contract on, over or under the rights-of-way of each railroad shown on the plans.

The Contractor shall assume all liability for any and all damages to work, employees, servants, equipment and materials caused by railroad traffic.

Prior to starting any work on railroad property, the Contractor shall furnish satisfactory evidence to the Department that insurance of the forms and amounts set out herein in paragraphs (a) and (b) has been obtained. Also, the Contractor shall furnish similar evidence to the Railroad Company that insurance has been obtained in accordance with the Standard Provisions for General Liability Policies and the Railroad Protective Liability Form as published in the Code of Federal Regulations, 23 CFR 646, Subpart A. Evidence to the Railroad Company shall be in the form of a Certificate of Insurance for coverages required in paragraph (b), and the original policy of the Railroad Protective Liability Insurance for coverage required in paragraph (a).

All insurance herein specified shall be carried until the contract is satisfactorily complete as evidenced by a release of maintenance from the Department.

The Railroad Company shall be given at least 30 days notice prior to cancellation of the Railroad Protective Liability Insurance policy.

For work within the limits set out in Subsection 107.18 and this subsection, the Contractor shall provide insurance for bodily injury liability, property damage liability and physical damage to property with coverages and limits no less than shown in paragraphs (a) and (b). Bodily injury shall mean bodily injury, sickness, or disease, including death at anytime resulting therefrom. Property damage shall mean damages because of physical injury to or destruction of property, including loss of use of any property due to such injury or destruction. Physical damage shall mean direct and accidental loss of or damage to rolling stock and their contents, mechanical construction equipment or motive power equipment.

(a) **Railroad Protective Liability Insurance** shall be purchased on behalf of the Railroad Company with limits of \$2,000,000 each occurrence; \$6,000,000 aggregate applying separately to each annual period for lines without passenger trains. If the line carries passenger train(s), railroad protective liability insurance shall be purchased on behalf of the Railroad Company with limits of \$5,000,000 each occurrence; \$10,000,000 aggregate applying separately to each annual period.

Coverage shall be limited to damage suffered by the railroad on account of occurrences arising out of the work of the Contractor on or about the railroad right-of-way, independent of the railroad's general supervision or control, except as noted in paragraph 4 below.

Coverage shall include:

- (1) death of or bodily injury to passengers of the railroad and employees of the railroad not covered by State workmen's compensation laws,
- (2) personal property owned by or in the care, custody or control of the railroads,
- (3) the Contractor, or any of the Contractor's agents or employees who suffer bodily injury or death as a result of acts of the railroad or its agents, regardless of the negligence of the railroads, and
- (4) negligence of only the following classes of railroad employees:
 - (i) any supervisory employee of the railroad at the job site
 - (ii) any employee of the railroad while operating, attached to, or engaged on, work trains or other railroad equipment at the job site which are assigned exclusively to the Contractor, or
 - (iii) any employee of the railroad not within (i) or (ii) above who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or Governmental authority.

(b) **Contractor's Liability - Railroad**, including subcontractors, XCU and railroad contractual with limits of \$1,000,000 each occurrence; \$2,000,000 aggregate. **Automobile** with limits of \$1,000,000 combined single limit any one accident; **Workers' Compensation and Employer's Liability** - statutory and \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. **Excess/Umbrella Liability** \$5,000,000 each occurrence; \$5,000,000 aggregate. All coverage to be issued in the name of the Contractor shall be so written as to furnish protection to the Contractor respecting the Contractor's operations in performing work covered by the contract. Coverage shall include protection from damages arising out of bodily injury or death and damage or destruction of property which may be suffered by persons other than the Contractor's own employees.

In addition, the Contractor shall provide for and on behalf of each subcontractor by means of a separate and individual liability and property damage policy to cover like liability imposed upon the subcontractor as a result of the subcontractor's operations in the same amounts as contained above; or, in the alternative each subcontractor shall provide same.

907-107.15--Third Party Beneficiary Clause. In the first sentence of the first paragraph of Subsection 107.15 on page 61, change "create the public" to "create in the public".

907-107.17--Contractor's Responsibility for Work. Delete the fifth sentence of the fifth paragraph of Subsection 107.17 on page 63 and substitute the following.

The eligible permanent items shall be limited to traffic signal systems, changeable message signs, roadway signs and sign supports, lighting items, guard rail items, delineators, impact

attenuators, median barriers, bridge railing or pavement markings. The eligible temporary items shall be limited to changeable message signs, guard rail items, or median barriers.

907-107.18--Contractor's Responsibility for Utility Property and Services. After the first sentence of Subsection 107.18 on page 63, add the following:

Prior to any excavation on the project, the Contractor shall contact MS 811 and advise them to mark all known utilities in the area of the excavation.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-108-37LPA

DATE: 12/17/2015

SUBJECT: Prosecution and Progress

Delete the first paragraph of Subsection 907-108.03.1 on pages 1 and 2, and substitute the following.

907-108.03.1--Progress Schedule. On working day projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract.

On completion date projects **which include A + B projects**, the Contractor shall furnish a progress schedule and be prepared to discuss both its proposed methodologies for fulfilling the scheduling requirements and its sequence of operations.

The Engineer will review Contractor prepared progress schedules and approve schedules as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer prior to commencing work. The progress schedule shall be a computer generated bar-chart type schedule meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-108-37LPA

CODE: (SP)

DATE: 6/25/2015

SUBJECT: Prosecution and Progress

Section 108, Prosecution and Progress, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-108.01--Subletting of Contract.

907-108.01.1--General. At the end of the last paragraph of Subsection 108.01.1 on page 73, add the following.

The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to make prompt payment within 15 calendar days as required above, or failure to submit the required OCR-484-LPA Form, Certification of Payments to Subcontractors, which is also designed to comply with prompt payment requirements.

907-108.02--Notice To Proceed. Delete the second paragraph of Subsection 108.02 on page 75.

Delete the fourth paragraph of Subsection 108.02 on page 75 and substitute the following.

Upon written request from the Contractor and if circumstances permit, the Notice to Proceed may be issued at an earlier date subject to the conditions stated therein. The Contractor shall not be entitled to any monetary damages or extension of contract time for any delay claim or claim of inefficiency occurring between the early issuance Notice to Proceed date and the Notice to Proceed date stated in the contract.

907-108.03--Prosecution and Progress. Delete Subsection 108.03.1 on pages 75 & 76, and substitute the following.

907-108.03.1--Progress Schedule. On working day and completion date projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract.

The Engineer will review the schedule and approve the schedule as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer and MDOT LPA Coordinator prior to commencing work. The progress schedule shall be a computer generated bar-chart type schedule meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

When preparing the progress schedule, the Contractor shall include the following:

- Show a time scale to graphically show the completion of the work within contract time.
- Define and relate activities to the contract pay items.
- Show all activities in the order the work is to be performed including submittals, submittal reviews, fabrication and delivery.
- Show all activities that are controlling factors in the completion of the work.
- Show the time needed to perform each activity and its relationship in time to other activities.

This progress schedule shall provide a bar for each major phase of construction such as, but not limited to, clearing and grubbing, grading, drainage structures, bridges, base, shoulders, paving, etc. with an estimated start working day and completion working day for each bar, all within the specified contract time.

A revised progress schedule may be required within ten days of the occurrence of any one of the following conditions:

- when a major change occurs in the work
- when a time extension is granted
- when the progress schedule becomes unrealistic

The Engineer's approval of the aforementioned Progress Schedules does not waive any contract requirements.

In the event the Contractor has not submitted an approvable progress schedule by the beginning of contract time, the progress schedule prepared by the LPA shall be the approved progress schedule and used to assess contract time.

An approved progress schedule shall be in effect until the date on which a revised schedule is approved. The approved progress schedule will be the basis for contract time assessment.

When a Critical Path Method (CPM) schedule is required in the proposal, this schedule will be used in lieu of the bar graph progress schedule in evaluating work progress. In such case, the same time frame noted in this subsection for the original submittal along with the update requirements will apply.

907-108.03.2--Preconstruction Conference. Delete the first paragraph of Subsection 108.03.2 on page 76 and substitute the following.

Prior to commencement of the work, a preconstruction conference shall be held for the purpose of discussing with the Contractor essential matters pertaining to the prosecution and satisfactory completion of the work. The Contractor will be responsible for scheduling the preconstruction conference. The Contractor will advise the Project Engineer in writing 14 days prior to the requested date that a conference is requested. The preconstruction conference will be coordinated through the MDOT LPA Coordinator to insure that the proper MDOT representatives are in

attendance. When the contract requires the Contractor to have a certified erosion control person, the Contractor's certified erosion control person shall be at the preconstruction conference. The local public agency will arrange for utility representatives and other affected parties to be present.

Delete the third paragraph of Subsection 108.03.2 on page 76.

907-108.06--Determination and Extension of Contract Time. Delete Subsections 108.06.1 and 108.06.2 on pages 79 thru 85 and substitute the following.

907-108.06.1--Based on [Working Day](#) Completion.

907-108.06.1.1--General. Contract Time will be established on the basis of [an allowable number of Working Days](#), as indicated in the contract. [A working day is defined as a day the Contractor worked or could have worked in accordance with the conditions set forth in Subsection 907-108.06.1.2, Subparagraphs \(a\) and \(b\), except during the months of December, January, and February.](#)

[During the months of December, January, and February, time will be assessed in the miscellaneous phase regardless of whether or not the Contractor actually works. The value for the time on any particular day will be determined by dividing the number of anticipated working day shown in the following table by the number of days in the particular month. This number will be expressed to three decimal places \(0.000\)](#)

The span of time allowed for the completion of the work included in the contract will be indicated in the contract documents and will be known as "Contract Time".

907-108.06.1.2--Contract Time. The following TABLE OF ANTICIPATED [WORKING DAYS](#) indicates an average/anticipated number of [working](#) days per month.

TABLE OF ANTICIPATED **WORKING** DAYS

Month	WORKING Days
January	6
February	7
March	11
April	15
May	19
June	20
July	21
August	21
September	20
October	16
November	11
December	5
Calendar Year	172

NOTE: The above Table is for informational purposes only. The actual working day total as assessed by the Project Engineer on Form CSD-765 shall govern.

Available **working** days will start being assessed at the original Notice to Proceed/Beginning of Contract Time date set in accordance with the contract, regardless of whether or not the Contractor has been issued an early Notice to Proceed.

Available **working** days will be based on soil and weather conditions and other specific conditions cited in the contract. The Engineer will determine on each applicable day the extent to which work in progress could have been productive, regardless of whether the Contractor actually worked.

An available **working** day will be assessed as follows:

(a) Any day of the week, Monday through Friday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works or could have worked for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works or could work four but less than six consecutive hours, one-half (0.5) of an available work day will be charged for that day. When the Contractor works or could work six or more consecutive hours during the day, one (1.0) available work day will be charged for that day, **and**

(b) Any Saturday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works less than four consecutive hours during the day, no time will be charged for that day. When the Contractor works four but less than six consecutive hours,

one-half (0.5) of an available work day will be charged for that day. When the Contractor works six or more consecutive hours during the day, one (1.0) available work day will be charged for that day.

Should the weather or other conditions be such that four (4) consecutive satisfactory hours are not available prior to noon (for daytime operations) or midnight (for nighttime operations), no time will be assessed for that day regardless of the above conditions. However, if the Contractor elects to work, time will be assessed in accordance with the previous paragraphs.

Time will not be charged during any required waiting period for placement of permanent pavement markings as set forth in Subsection 618.03 provided all other work is complete except growth and coverage of vegetative items as provided in Subsection 210.01.

Each month the Engineer will complete, and furnish to the Contractor, an "Assessment Report of Working Days" (CSD-765). This report shows the number of working days assessed during the estimate period and the cumulative working days assessed to date. The Contractor should review the Engineer's report as to the accuracy of the assessment and confer with the Resident or Project Engineer to rectify any differences. Each should make a record of the differences, if any, and conclusions reached. In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 15 calendar days following the ending date of the monthly report in question to file a protest Notice of Claim in accordance with the provisions of Subsection 105.17. Otherwise, the Engineer's assessment shall be final unless mathematical errors of assessment are subsequently found to exist, and any claim of the Contractor as to such matter shall be waived.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage of time elapsed will be determined by comparing the working days assessed to-date on Form CSD-765 to the total allowable working days for the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.1.3--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

An extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes, named tropical storms,

tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Working Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be on a working day basis.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

If the **contract time** of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the **working days are exhausted**, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.1.4--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges **for the remaining working days** will resume. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.06.2--Based on Specified Completion Date.

907-108.06.2.1--General. Contract Time will be established on the basis of a Specified Completion Date indicated in the Contract, or as determined by the Contractor in accordance with the contract documents. The span of time allowed for the completion of the work included in the contract will be known as "Contract Time".

For contracts in which a Specified Completion Date is indicated in the Contract, the span of Contract Time shall be the number of Calendar Days specified in the Contract.

For contracts in which a Completion Date is determined by the Contractor (A + B Contracts), the span of Contract Time shall be between the date of the Notice to Proceed and the date representing the number of Calendar Days determined by the Contractor to complete the work.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

At any given date, the ratio of the accumulated monetary value of that part of the work actually accomplished to the total contract bid amount adjusted to reflect approved increases or decreases shall determine the "percent complete" of the work.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage elapsed time shall be calculated as a direct ratio of the expired Calendar Days to the total Calendar Days provided for in the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.2.2--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

On all completion date contracts, an extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes,

named tropical storms, tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Calendar Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be based on a calendar day basis, excluding Saturdays, Sundays or legal holidays recognized by the Department in Subsection 108.04.1.

If the contract time of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the specified completion date, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.2.3--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges will resume. If the specified completion date had not been reached at the time the Contractor called for a final inspection, the calendar day difference between the specified completion date and the date the Contractor called for a final inspection will be added after the 14-day period before starting liquidation damages. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.07--Failure to Complete the Work on Time. Delete the Schedule of Deductions table in Subsection 108.07 on page 85, and substitute the following.

Schedule of Deductions for Each Day of Overrun in Contract Time

Original Contract Amount		Daily Charge
From More Than	To and Including	Per Calendar Day
\$ 0	100,000	\$ 150
100,000	500,000	360
500,000	1,000,000	540
1,000,000	5,000,000	830
5,000,000	10,000,000	1,200
10,000,000	20,000,000	1,800
20,000,000	-----	3,500

907-108.10--Termination of Contractor's Responsibility. In the last sentence of Subsection 108.10 on page 88, change “bond” to “performance and payment bond(s)”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-109-8

CODE: (SP)

| DATE: 09/10/2015

SUBJECT: Measurement and Payment

Section 109, Measurement and Payment, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-109.01--Measurement of Quantities. Delete the third full paragraph of Subsection 109.01 on page 90 and substitute the following.

When requested by the Contractor, material specified to be measured by the cubic yard or ton may be converted to the other measure as appropriate. Factors for this conversion will be determined by the District Materials Engineer and agreed to by the Contractor. The conversion of the materials along with the conversion factor will be incorporated into the contract by supplemental agreement. The supplemental agreement must be executed before such method of measurement is used.

After the second sentence of the fourth full paragraph of Subsection 109.01 on page 90, add the following.

Where loose vehicle measurement (LVM) is used, the capacity will be computed to the nearest one-tenth cubic yard and paid to the whole cubic yard. Measurements greater than or equal to nine-tenths of a cubic yard will be rounded to the next highest number. Measurements less than nine-tenths of a cubic yard will not be rounded to the next highest number. Example: A vehicle measurement of 9.9 cubic yards will be classified as a 10-cubic yard vehicle. A vehicle measurement of 9.8 cubic yards will be classified as a 9-cubic yard vehicle.

907-109.04--Extra and Force Account Work. Delete the first paragraph under Subsection 109.04 on page 91, and substitute the following.

When extra work results for any reason and is not handled as prescribed elsewhere herein, the Engineer and the Contractor will attempt to agree on equitable prices. When such prices are agreed upon, a Supplemental Agreement will be issued by the Engineer.

When the Supplemental Agreement process is initiated, the Contractor will be required to submit to the Engineer a detailed breakdown for Material, Labor, Equipment, Profit and Overhead. The total allowable markup (which includes Prime Contractor and Subcontractor work, if applicable) for Supplemental Agreement work shall not exceed 20%, which also includes tax and bond.

The requirement for detailed cost breakdowns may be waived when a Department's Bid Item History exists for the proposed item(s), and the Contractor's requested price, including mark-up, is within 20% of the Department's Bid History cost for that item(s). In any case, the Department reserves the right to request detailed cost breakdowns from the Contractor on any Supplemental Agreement request.

When equitable prices cannot be agreed upon mutually by the Engineer and the Contractor, the Engineer will issue a written order that work will be completed on a force account basis to be compensated in the following manner:

In the last sentence of subparagraph (b) in Subsection 109.04 on page 91, change "bond" to "bond(s)".

Delete the first and second paragraphs of subparagraph (d) in Subsection 109.04 on page 92 and substitute the following.

Equipment. For any machinery or special equipment, other than small tools, authorized by the Engineer, the Contractor will use the rates shown in the book entitled "Rental Rate Blue Book For Construction Equipment" as published by EquipmentWatch® and is current at the time the force account work is authorized, unless otherwise allowed by the Engineer. This book shall be used to determine equipment ownership and operating expense rates. These rates do not include allowances for operating labor, mobilization or demobilization costs, overhead or profit, and do not represent rental charges for those in the business of renting equipment. Operating labor and overhead cost will be allowed. Subject to advance approval of the Engineer, actual transportation cost for a distance of not more than 200 miles will be reimbursed for equipment not already on the project. The cost of transportation after completion of the force account work will be reimbursed except it cannot exceed the allowance for moving the equipment to the work.

907-109.06--Partial Payment.

907-109.06.1--General. Delete the fourth and fifth sentences of the third paragraph of Subsection 109.06.1 on page 94, and substitute the following.

In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 25 calendar days following the Contractor's receipt of the monthly estimate in question to file in writing, a protest Notice of Claim in accordance with the provisions Subsection 105.17. Otherwise, the Engineer's estimated quantities shall be considered acceptable pending any changes made during the checking of final quantities.

907-109.06.2--Advancement on Materials. Delete Subsection 109.06.2 on pages 94 & 95, and substitute the following.

907-109.06.2--Advancement on Materials. Partial payments may include advance payment for certain nonperishable or durable materials such as base aggregates, reinforcing steel, bridge piling, structural steel, prefabricated bridge components, traffic signal equipment, electrical equipment, fencing materials, and sign materials with approval of the Engineer. Advance payment may be requested for structural steel members provided fabrication has been completed and the members have been declared satisfactory for storage by a Department representative. The Contractor must make a written request to the Project Engineer for advanced payment and furnish written consent of the Surety. To qualify for advance payment, materials must be stored or stockpiled on or near the project or at other locations approved by the Engineer; or in the case of precast concrete members, treated timber, guard posts and other approved preprocessed durable and bulky materials, the materials may be stored at the commercial producer's yard provided it is located in Mississippi; or in the case of prestressed concrete members that may

require being produced at an out-of-state location, the prestress members shall be produced and may be stored at the commercial manufacturer's yard provided it is a PCI certified plant on the Department's List of Approved Prestress & Precast Plants and it is located within the continental United States; or in the case of structural steel members that may require fabrication at an out-of-state location, the fabricated members may be stored at the location of the commercial fabricator's yard provided it is located within the continental United States.

Advancements will not be allowed until the Project Engineer has received copies of material invoices and certified test reports or acceptable certificates of conformance, and in the case of materials stored at the commercial producer's/fabricator's yard, the material shall be positively identified for the specific project and a Certificate of Storage issued by the Department or a designated representative of the Department. Requests for advancements on fabricated structural steel members and prestress concrete members stored out-of-state will be denied when the Department does not have available a designated representative to issue a Certificate of Storage.

The Contractor shall make suitable arrangements to the satisfaction of the Engineer for storage and protection at approved sites or, in the case of materials stored at the commercial producer's yard located in Mississippi or, in the case of fabricated structural steel members stored at the commercial fabricator's yard or prestress concrete members stored at a commercial manufacturer's yard located within the continental United States, the Contractor shall make arrangements with the producer/fabricator for suitable storage and protection. If advanced payment is allowed and the materials are damaged, lost, destroyed or for any reason become unacceptable, the previous payments will be deducted from subsequent estimates until the materials are replaced or restored to an acceptable condition. In all cases, the Contractor shall save harmless the Commission in the event of loss or damage, regardless of cause.

An invoice or an accumulation of invoices for each eligible material must total \$10,000 or more before consideration will be given for making advanced payment. When allowed, advance payment will be based on verified actual material cost plus transportation charges to the point of storage. Sales tax, local haul and handling costs shall not be included as material cost.

Advanced payment shall not exceed 100% of the invoice price or 75% of the total contract bid price for the pay item, whichever is less.

Advanced payment for a component of a pay item shall not exceed 95% of the invoice price or 75% of the total contract bid price for the pay item of which the material is a part, whichever is less.

Advanced payment will be made only on materials that will be incorporated permanently in the project.

No advanced payment will be made on minor material items, hardware, etc.

No advanced payment will be made for materials when it is anticipated that those materials will be incorporated into the project within 60 calendar days.

Advanced payment will be paid for those materials which are not readily available, and which can be easily identified and secured for a specific project and for which lengthy stockpiling periods would not be detrimental.

Where a storage area is used for more than one project, material for each project shall be segregated from material for other projects, identified, and secured. Adequate access for auditing shall be provided. All units shall be stored in a manner so that they are clearly visible for counting and/or inspection of the individual units.

Unless specifically provided for in the contract, advance payment will not be made on materials, except for fabricated structural steel members or prestress concrete members, stored or stockpiled outside of the State of Mississippi.

Materials for which an advanced payment has been allowed must be paid for by the Contractor within 60 days of the estimate on which the advanced payment was first allowed and proof of said payment must be verified by the supplier. If proof of payment is not furnished within the allowable 60 days, the advanced payment will be deducted on subsequent current estimates until such time proof of payment is furnished.

As the materials are incorporated into the work, proportionate reductions for advance payments shall be made from monthly estimates covering the work performed. Calculation of percentage of completion, or rate of progress, shall be based on completed work and no consideration will be given to stockpiled materials.

907-109.07--Changes in Material Costs. Delete the third full paragraph of Subsection 109.07 on page 96 and substitute the following.

A link to the established base prices for bituminous products and fuels will be included in the contract documents under a Notice to Bidders entitled "Petroleum Products Base Prices."

Delete the last paragraph of Subsection 109.07 on pages 97 & 98, and substitute the following.

Adjustments herein provided shall not apply to fuels consumed or materials incorporated into the work during any monthly estimate period falling wholly after the expiration of contract time as defined in Subsection 101.02 of the applicable Mississippi Standard Specifications for Road and Bridge Construction, and as determined by checked final quantities.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-110-2

CODE: (SP)

| DATE: 04/02/2010

SUBJECT: Wage Rates

Section 110, Required Contract Provisions, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-110.02--Application. Delete Subsection 110.02.2 on page 100 and substitute the following.

907-110.02.2--Wage Rates. All persons employed or working upon the site of the work will be paid at wage rates not less than those contained in the wage determination decision of the Secretary of Labor in effect 10 days prior to taking bids.

| Bidders are advised that regardless of the wage rates listed in the Supplement to FHWA 1273 in the contract, minimum federal wage rates must be paid.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-213-2

CODE: (IS)

| DATE: 01/25/2008

SUBJECT: Agricultural Limestone

Section 907-213, Fertilizing, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-213.05--Basis of Payment. Delete the first sentence of the first paragraph of Subsection 213.05 on page 136 and add the following as the first paragraph of this subsection.

| Hard rock agricultural limestone will be paid for at the contract unit price per ton. Hard rock agricultural limestone with a relative neutralizing value (RNV), determined in accordance with Subsection 907-715-02.2.1.3, of between 60.0% and 62.9% will be paid for at half (½) the contract unit price per ton. No payment will be made for hard rock agricultural limestone with an RNV less than 60.0%.

Delete the first pay item listed on page 137 and substitute the following:

907-213-A: Agricultural Limestone

- per ton

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-216-1

CODE: (IS)

DATE: 05/22/2013

SUBJECT: Solid Sodding

Section 216, Solid Sodding, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-216.04--Method of Measurement. Delete the third and fourth paragraphs of Subsection 216.04 on page 144.

907-216.05--Basis of Payment. Delete the first paragraph of Subsection 216.05 on pages 144 and 145, and substitute the following.

Solid sodding will be paid for at the contract unit price per square yard, which price shall be full compensation for all labor, equipment, materials, tools, ground preparation, fertilization, and all incidentals necessary to complete the work.

Add the "907" prefix to the pay items listed on page 145.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-237-4

CODE: (SP)

| DATE: 03/13/2012

SUBJECT: Wattles

Section 907-237, Wattles, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-237 - WATTLES

907-237.01--Description. This work consists of furnishing, constructing and maintaining wattles for the retention of soil around inlets, swale areas, small ditches, sediment basins and other areas as necessary. Also, the work includes removing and disposing of the wattles and silt accumulations.

Measurement and payment for wattles will be made only when a pay item is included in the bid schedule of the proposal. The quantity is estimated for bidding purposes only and will be dependent upon actual conditions which occur during construction of the project.

| **907-237.02--Materials.** Wattles used around inlets shall have a diameter of twelve inches (12") and a length adequate to meet field conditions. Wattles used at other locations shall have a diameter of twenty inches (20") and a length adequate to meet field conditions. The minimum diameter for the above wattle sizes shall be one inch (1") less than the specified diameter.

The stakes used in securing the wattles in place shall be placed approximately three feet (3') apart throughout the length of the wattle. Stakes shall be wooden and of adequate size to stabilize the wattles to the satisfaction of the Engineer.

In addition to the requirements of this specifications, wattles shall be listed on the Department's "Approved Sources of Materials".

907-237.03--Construction Requirements.

907-237.03.1--General. The wattles shall be constructed at the locations and according to the requirements shown on the erosion control plan.

907-237.03.2--Maintenance and Removal. The Contractor shall maintain the wattles and remove and dispose of silt accumulations.

When the wattles are no longer needed, they shall be removed and the Contractor shall dispose of silt accumulations and treat the disturbed areas in accordance with the contract requirements.

907-237.04--Method of Measurement. Wattles of the size specified will be measured per linear foot.

907-237.05--Basis of Payment. Wattles, measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for installation, maintaining and removal of the wattles, the removal and disposal of silt accumulations and any required restoration of the disturbed areas.

Payment will be made under:

907-237-A: Wattles, Size

- per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-246-3

CODE: (SP)

DATE: 11/08/2010

SUBJECT: Sandbags and Rockbags

Section 907-246, Sandbags and Rockbags, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-246 -- SANDBAGS AND ROCKBAGS

907-246.01--Description. This item of work shall consist of the furnishing, installing, and maintaining sandbags and rockbags for the purpose of temporary erosion control by intercepting and slowing the flow of sediment-laden runoff water, or for use as a temporary dam.

907-246.02--Materials. The filler material for sandbags shall consist of a fine aggregate meeting the requirements of Subsection 703.02. The filler material for rockbags shall consist of a size 57 aggregate meeting the requirements of Subsection 703.03.

The bag material shall be woven polypropylene, polyethylene or polyamide fabric with a minimum unit weight of four (4) ounces per square yard. The bags shall be a minimum of 21 inches in length, 12 inches in width, and four (4) in thickness when filled.

907-246.03--Construction Requirements. Sandbags and rockbags shall be used to construct a berm/dam which will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Sand or rock shall be placed in the bag so that at least the top six (6) inches of the bag is unfilled to allow for proper tying of the open end. Any subsequent rows of bags shall be offset one-half the length of the preceding row to provide a layered brick-type arrangement.

The sandbag and rockbag berm/dam installation shall be maintained in good condition by the Contractor. All necessary work and materials to maintain the integrity of the installation shall be provided until earthwork construction is complete and permanent erosion-control features are in place. The maintenance of the bags will not be paid for separately and will be included in the cost for sandbags or rockbags.

907-246.04--Method of Measurement. Sandbags and rockbags will be measured per linear foot or each.

Sandbags and rockbags measured by the linear foot shall be in accordance with the details in the erosion control drawing. The length of the sandbag or rockbag berm/dam will be measured end-to-end along the cross-section of the ditch in accordance with the erosion control drawing.

907-246.05--Basic of Payment. Sandbags and rockbags, measured as prescribed above, will be

paid for per linear foot or each, which prices shall be full compensation for furnishing bags, fine aggregate, size 57 aggregate, placement of bags, maintenance of the installation, removal and disposal of the sediment deposits and removal after construction has been completed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

907-246-A: Sandbags - per linear foot or each

907-246-B: Rockbags - per linear foot or each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-601-1

CODE: (IS)

DATE: 08/29/2007

SUBJECT: Structural Concrete

Division 600, Incidental Construction, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the heading **DIVISION 600 - INCIDENTAL CONSTRUCTION**, add the following:

Unless otherwise specified, all testing of Portland cement concrete in Division 600 shall be in accordance with the requirements of Subsection 907-601.02.1.

907-601.02--Materials.

907-601.02.1--General. Delete the second and third sentence of the first paragraph of Subsection 601.02.1 on page 348, and substitute the following:

Sampling and testing will be in accordance with TMD-20-04-00-000 or TMD-20-05-00-000, as applicable.

907-601.03.6.3--Removal of Falsework, Forms, and Housing. Delete the first paragraph, the table and second paragraph of Subsection 601.03.6.3 on pages 349 and 350, and substitute the following:

The removal of falsework, forms, and the discontinuance of heating, shall be in accordance with the provisions and requirements of Subsection 907-804.03.15, except that the concrete shall conform to the following compressive strength requirements:

Wingwall and Wall Forms not Under Stress	1000 psi
Wall Forms under Stress	2200 psi
Backfill and Cover clear	2400 psi

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Subsection 907-804.03.15. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of Subsection 907-804.03.15. Technicians using the maturity meter or calculating strength/maturity graphs shall meet the requirements of Subsection 907-804.03.15.

907-601.05--Basis of Payment. Add the “907” prefix to the pay items listed on page 352.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-618-13

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Temporary Construction Signs

Section 618, Maintenance of Traffic and Traffic Control Plan, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-618.03--Construction Requirements.

907-618.03.2--Barricades, Signs, and Flaggers. Delete the second paragraph of Subsection 618.03.2 on page 414, and substitute the following.

Flaggers shall be stationed at such points as may be deemed necessary.

Temporary construction signs shall be removed as their use becomes inapplicable. However, placing temporary signs and their supports flat on the ground outside the shoulder break line will be allowed.

907-618.05--Basis of Payment. Delete the first two pay items listed on page 418, and substitute the following.

907-618-A: Maintenance of Traffic - lump sum

907-618-B: Additional Construction Signs - per square foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-626-25

CODE: (IS)

DATE: 11/13/2012

SUBJECT: Thermoplastic Traffic Markings

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-626.01--Description. After the last sentence of the first paragraph of Subsection 626.01 on page 443, add the following.

All pavement marking material, excluding edge lines over rumble strips, shall be applied using the extrusion/ribbon method. Edge lines placed over rumble strips shall be applied using the atomization/spray method.

907-626.03.1.1--Equipment. After the second paragraph of Subsection 626.03.1.1 on page 444, add the following.

When edge lines are placed over rumble strips, the equipment must be able to apply the marking material using the atomization/spray method instead of extrusion/ribbon method.

907-626.03.1.2--Construction Details. Delete the second sentence of the first full paragraph of Subsection 626.03.1.2 on page 445, and substitute the following.

Unless otherwise specified in the plans or contract documents, the thickness shall be 90 mils for edge lines, center lines, lane lines, barrier lines and detail stripe including gore markings, and 120 mils for crosswalks, stop lines, and railroad, word and symbol markings.

After the last sentence of the third full paragraph of Subsection 626.03.1.2 on page 445, add the following.

When double drop thermoplastic stripe is called for in the contract, additional beads by the drop-on method shall be applied as follows.

Class A glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.
Class B glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.

The Class B glass beads shall be applied to the newly placed stripe first, followed by the application of the Class A glass beads.

907-626.05--Basis of Payment. Delete the pay items listed on page 446 and substitute the following.

907-626-A: 6" Thermoplastic* Traffic Stripe, Skip White	- per linear foot or mile
907-626-B: 6" Thermoplastic* Traffic Stripe, Continuous White	- per linear foot or mile
907-626-C: 6" Thermoplastic* Edge Stripe, Continuous White	- per linear foot or mile
907-626-D: 6" Thermoplastic* Traffic Stripe, Skip Yellow	- per linear foot or mile
907-626-E: 6" Thermoplastic* Traffic Stripe, Continuous Yellow	- per linear foot or mile
907-626-F: 6" Thermoplastic* Edge Stripe, Continuous Yellow	- per linear foot or mile
907-626-G: Thermoplastic* Detail Stripe, <u>Color</u>	- per linear foot
907-626-H: Thermoplastic* Legend, White	- per linear foot or square foot

* Indicate Double Drop if applicable

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-701-5

DATE: 09/17/2014

SUBJECT: Hydraulic Cement

In the last paragraph of Subsection 907-701.04.1.1 on page 3, change “AASHTO Designation: M 240, Table 3” to “AASHTO Designation: M 240, Table 4”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-701-5

CODE: (SP)

| DATE: 08/20/2014

SUBJECT: Hydraulic Cement

Section 701, Hydraulic Cement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete Subsection 701.01 on pages 595 & 596, and substitute the following:

907-701.01--General. The following requirements shall be applicable to hydraulic cement:

Only hydraulic cements conforming to Section 701 shall be used. Hydraulic cements shall not be listed or designated as meeting more than one AASHTO or Department type.

Different brands of hydraulic cement, or the same brand of hydraulic cement from different mills, shall not be mixed or used alternately in any one class of construction or structure, without written permission from the Engineer; except that this requirement will not be applicable to hydraulic cement treatment of design soils, or bases.

The Contractor shall provide suitable means for storing and protecting the hydraulic cement against dampness. Hydraulic cement, which for any reason, has become partially set or which contains lumps of caked hydraulic cement will be rejected. Hydraulic cement salvaged from discarded or used bags shall not be used.

The temperature of bulk hydraulic cement shall not be greater than 165°F at the time of incorporation in the mix.

Acceptance of hydraulic cement will be based on the certification program as described in the Department's Materials Division Inspection, Testing, and Certification Manual and job control sampling and testing as established by Department SOP.

Retests of hydraulic cement may be made for soundness and expansion within 28 days of test failure and, if the hydraulic cement passes, it may be accepted. Hydraulic cement shall not be rejected due to failure to meet the fineness requirements if upon retests after drying at 212°F for one hour, it meets such requirements.

Delete Subsection 701.02 on page 596, and substitute the following:

907-701.02--Portland Cement.

907-701.02.1--General.

907-701.02.1.1--Types of Portland Cement. Portland cement (cement) shall be either Type I or Type II conforming to AASHTO Designation: M85. Type III cement conforming to AASHTO Designation: M85 or Type III (MS), as defined by the description below Table 1, may be used for the production of precast or precast-prestressed concrete members.

907-701.02.1.2--Alkali Content. All cement types in this Subsection shall meet the Equivalent alkali content requirement for low-alkali cements listed in AASHTO Designation: M85, Table 2.

907-701.02.2--Replacement by Other Cementitious Materials. The maximum replacement of cement by weight is 25% for fly ash or 50% for ground granulated blast furnace slag (GGBFS). The minimum tolerance for replacement shall be 5% below the maximum replacement content. Replacement contents below this minimum tolerance by fly ash or GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of cement by fly ash or GGBFS.

907-701.02.2.1--Portland Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater. When portland cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash, GGBFS, or silica fume shall be as follows in Table 1.

Table 1- Cementitious Materials for Soluble Sulfate Conditions

Sulfate Exposure	Water-soluble sulfate (SO ₄) in soil, % by mass	Sulfate (SO ₄) in water, ppm	Cementitious material required*
Moderate and Seawater	0.10 - 0.20	150 - 1,500	Type II **, ***, **** cement, or Type I cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume
Severe	0.20 - 2.00	1,500 - 10,000	Type I cement with a replacement by weight of 50% GGBFS, or Type II cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume

* The values listed in this table for replacement of portland cement by the cementitious materials listed are maximums and shall not be exceeded. The

minimum tolerance for replacement shall be 0.5% below the maximum replacement content. Replacement contents below this minimum tolerance by the cementitious materials listed in this table do not meet the requirements for the exposure conditions listed and shall not be allowed.

** Type III cement conforming to AASHTO Designation: M85 with a maximum 8% tricalcium aluminate (C₃A) may be used in lieu of Type II cement as allowed in Subsection 907-701.02.1; this cement is given the designation "Type III(MS)".

*** Blended cement meeting the sulfate resistance requirements of Subsection 907-701.04 may be used in lieu of Type II as allowed in Subsection 907-701.04.

**** Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.02.2.

Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed above.

907-701.02.2.2--Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater. When portland cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 907-701.02.2.1. Silica fume shall be used to bring the cementitious materials into compliance with the requirements of Table 1.

Delete Subsection 701.03 on page 596, and substitute the following:

907-701.03--Masonry Cement. Masonry cement shall conform to ASTM Designation: C 91 and shall only be used in masonry applications.

Delete Subsection 701.04 on page 596, and substitute the following:

907-701.04--Blended Hydraulic Cement.

907-701.04.1--General.

907-701.04.1.1--Types of Blended Cement. Blended hydraulic cements (blended cements) shall be of the following types and conform to AASHTO Designation: M 240:

Type IS – Portland blast-furnace slag cement

Type IP – Portland-pozzolan cement

Type IL – Portland-limestone cement

Blended cement Types IS and IP for use in portland cement concrete or soil stabilization exposed to the moderate soluble sulfate condition or exposure to seawater as defined in Table 1 shall meet the Sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3 and the "(MS)" suffix shall be added to the type designation.

907-701.04.1.2--Alkali Content. All blended cement shall be made with clinker that would result in cement meeting the requirements of Subsection 907-701.02.1.2 when used in the production of AASHTO Designation: M 85, Type I or Type II cement.

907-701.04.2--Replacement by Other Cementitious Materials. The maximum replacement of blended cement Type IL by weight is 35% for fly ash or 50% for GGBFS. Replacement contents below 20% fly ash or 45% GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of blended cement by fly ash or GGBFS. No additional cementitious materials, such as Portland cement, performance hydraulic cement, fly ash, GGBFS, metakaolin, or others, shall be added to or as a replacement for blended cement Types IS and IP.

907-701.04.3--Exposure to Soluble Sulfate Conditions or Seawater. When portland cement concrete or blended cement for soil stabilization is exposed to moderate soluble sulfate conditions or to seawater, where the moderate soluble sulfate condition is defined in Table 1, the blended cement shall meet the sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3.

When portland cement concrete or blended cement for soil stabilization is exposed to severe soluble sulfate conditions, where the severe soluble sulfate condition is defined in Table 1, blended cements shall not be used.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-707-4

CODE: (SP)

DATE: 04/24/2012

SUBJECT: Rubber Type Gaskets

Section 707, Joint Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-707.04--Rubber Type Gaskets for Joining Conduit. In the first sentence of Subsection 707.04 on page 636, delete the reference to “AASHTO Designation: M 315” and substitute “ASTM Designation: C 443”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-711-4

CODE: (IS)

DATE: 06/26/2009

SUBJECT: Synthetic Structural Fiber Reinforcement

Section 711, Reinforcement and Wire Rope, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After Subsection 711.03.4.3 on page 665, add the following:

907-711.04--Synthetic Structural Fiber. The synthetic structural fibers shall be approved for listing in the Department's "Approved Sources of Materials" prior to use. The synthetic structural fibers shall be added to the concrete and mixed in accordance with the manufacturer's recommended methods.

907-711.04.1--Material Properties. The fibers shall meet the requirements of ASTM Designation: C 1116, Section 4.1.3. The fibers shall be made of polypropylene, polypropylene/polyethylene blend, nylon, or polyvinyl alcohol (PVA).

907-711.04.2--Minimum Dosage Rate. The dosage rate shall be such that the average residual strength ratio ($R_{150,3.0}$) of fiber reinforced concrete beams is a minimum of 20.0 percent when the beams are tested in accordance with ASTM Designation: C 1609. The dosage rate for fibers shall be determined by the following.

The fiber manufacturer shall have the fibers tested by an acceptable, independent laboratory acceptable to the Department and regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology and approved to perform ASTM Designations: C 39, C 78, and C192.

The laboratory shall test the fibers following the requirements of ASTM Designation: C 1609 in a minimum of three (3) test specimens cast from the same batch of concrete, molded in 6 x 6 x 20-inch standard beam molds meeting the requirements of ASTM Designation: C 31. The beams shall be tested on an 18-inch span. The tests for $R_{150,3.0}$ shall be performed when the average compressive strength of concrete used to cast the beams is between 3500 and 4500 psi. The tests for compressive strength shall follow the requirements of ASTM Designation: C 39. The average compressive strength shall be determined from a minimum of two (2) compressive strength cylinders.

The value for $R_{150,3}$ shall be determined using the following equation:

$$R_{150,3.0} = \frac{f_{150,3.0}}{f_1} \times 100$$

The residual flexural strength ($f_{150,3.0}$) shall be determined using the following equation:

$$f_{150,3.0} = \frac{P_{150,3.0} \times L}{b \times d^2}$$

where:

$f_{150,3.0}$ is the residual flexural strength at the midspan deflection of $L/150$, (psi),

$P_{150,3.0}$ is the residual load capacity at the midspan deflection of $L/150$, (lbf),

L is the span, (in),

b is the width of the specimen at the fracture, (in), and

d is the depth of the specimen at the fracture, (in).

For a 6 x 6 x 20-inch beam, the $P_{150,3.0}$ shall be measured at a midspan deflection of 0.12 inch.

Additionally, $R_{150,3.0}$, $f_{150,3.0}$, and $P_{150,3.0}$ may also be referred to as R_{150}^{150} , f_{150}^{150} , and P_{150}^{150} respectively.

At the dosage rate required to achieve the minimum $R_{150,3}$, the mixture shall both be workable and the fibers shall not form clumps.

The manufacturer shall submit to the State Materials Engineer certified test reports from the independent laboratory showing the test results of each test specimen.

907-711.04.3--Job Control Requirements. The synthetic structural fibers shall be one from the Department's "Approved Sources of Materials."

At the required dosage rate, the mixture shall both be workable and the fibers shall not form clumps to the satisfaction of the Engineer. If the mixture is determined by the Engineer to not be workable or have clumps of fibers, the mixture may be rejected.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-713-6

CODE: (SP)

DATE: 03/17/2016

SUBJECT: Admixtures for Concrete

Section 713, Concrete Curing Materials and Admixtures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

After the second paragraph of Subsection 713.01.2 on page 676, add the following.

Type 1-D compound may be used on bridge rails, median barriers, and other structures requiring a spray finish. When Type 1-D compound is used, it will be the responsibility of the Contractor to assure that the compound has dissipated from the structure prior to applying the spray finish and that the spray finish adheres soundly to the structure.

Delete Subsection 713.02 on pages 676 & 677, and substitute the following.

907-713.02--Admixtures for Concrete. Air-entraining admixtures used in Portland cement concrete shall comply with AASHTO Designation: M 154. Set-retarding, accelerating, and/or water-reducing admixtures shall comply with AASHTO Designation: M 194. Water-reducing admixture shall meet the minimum requirements for Type A. Set-retarding admixtures shall meet the minimum requirements for Type D. Admixtures providing a specific performance characteristic(s) other than those of water reduction or set retardation shall meet the minimum requirements for Type S. For admixtures meeting the requirements for Type S, the manufacturer shall provide data to substantiate the specific performance characteristic(s) to the satisfaction of the State Materials Engineer.

In order to obtain approval of an admixture, the State Materials Engineer shall have been furnished certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO Standard Specification.

The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

After an admixture has been approved, the Contractor shall submit to the State Materials Engineer, with each new lot of material shipped, a certification from the manufacturer in accordance with the requirements of Subsection 700.05.1 and stating the material is of the same composition as

originally approved and has not been changed or altered in any way. The requirement in Subsection 700.05.1(b) is not required on the certification from the manufacturer.

Admixtures containing chlorides will not be permitted.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

Admixtures shall only be used in accordance with the manufacturer's recommended dosage range as set forth in the manufacturer's approval request correspondence. When an admixture is used in Portland cement concrete, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.1--Source Approval. In order to obtain approval of an admixture, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO or Department Specification for the specific type and the dosage range for the specific type of admixture.

907-713.02.2--Specific Requirements. Admixtures containing chlorides will not be permitted.

907-713.02.3--Acceptance. The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

With each new lot of material shipped the Contractor shall submit to the State Materials Engineer, a notarized certification from the manufacturer showing that the material complies with the requirements of the applicable AASHTO or Department Specification.

When an admixture is used, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.4--Waterproofing Admixture. This product is used as a waterproofing admixture for cast in place concrete bridge decks and bridge deck topping.

The Contractor shall submit manufacturer's product data and installation methods for each type of the products required to demonstrate the product complies with specifications.

The materials shall be installed in accordance with manufacturer's instructions.

The waterproofing admixture shall be one of the following, or an approved equal.

- Xypex Admix
- Everdure Caltite
- Hycrete W1000

The dosage rate for the above admixtures shall be as follows:

- Xypex Admix shall be 15 pounds per cubic yard.
- Everdure Caltite shall be a minimum of 1.5% by weight of cement.
- Hycrete W1000 shall be a minimum one (1) gallon per cubic yard.

Any retardation of set that occurs will depend upon the concrete mix design and the dosage rate of the admixture.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-714-8

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Miscellaneous Materials

Section 714, Miscellaneous Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-714.05--Fly Ash. Delete Subsections 714.05.1 & 714.05.2 on pages 680 & 681, and substitute the following.

907-714.05.1--General. The fly ash source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of fly ash shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

Different classes of fly ash or different sources of the same class shall not be mixed or used in the construction of a structure or unit of a structure without written permission from the Engineer.

The Contractor shall provide suitable means for storing and protecting the fly ash from dampness. Separate storage silos, bins, or containers shall be provided for fly ash. Fly ash which has become partially set or contains lumps of caked fly ash shall not be used.

The temperature of the bulk fly ash shall not be greater than 165°F at the time of incorporation into the work.

All classes of fly ash shall meet the supplementary option chemical requirement for available alkalies listed in AASHTO Designation: M 295, Table 2. Class F fly ash shall have a calcium oxide (CaO) content of less than 6.0%. Class C fly ash shall have a CaO content of greater than or equal to 8.0%.

The replacement of Portland cement with fly ash shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

In addition to these requirements, fly ash shall meet the following specific requirements for the intended use.

907-714.05.2--Fly Ash for Use in Concrete. When used with Portland cement in the production of concrete or grout, the fly ash shall meet the requirements of AASHTO Designation: M 295, Class C or F, with the following exception:

The loss on ignition shall not exceed 6.0 percent.

No additional cementitious materials, such as blended hydraulic cement, GGBFS, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with fly ash.

907-714.06--Ground Granulated Blast Furnace Slag (GGBFS). Delete Subsection 714.06.1 on page 681, and substitute the following.

907-714.06.1--General. The GGBFS source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of GGBFS shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

The Contractor shall provide suitable means for storing and protecting the GGBFS against dampness and contamination. Separate storage silos, bins, or containers shall be provided for GGBFS. GGBFS which has become partially set, caked or contains lumps shall not be used.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing or other additions made to the GGBFS during production.

GGBFS from different mills shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer; except that this requirement will not be applicable to cement treatment of design soils or bases.

No additional cementitious materials, such as blended hydraulic cement, fly ash, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with GGBFS in the production of concrete. The replacement of Portland cement with GGBFS shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

Delete Subsection 714.07 on page 682, and substitute the following.

907-714.07--Additional Cementitious Materials.

907-714.07.1--Metakaolin.

907-714.07.1.1--General. Metakaolin shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Metakaolin from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with metakaolin in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the metakaolin during production.

907-714.07.1.2--Source Approval. The approval of each metakaolin source shall be on a case

by case basis as determined by the State Materials Engineer. In order to obtain approval of a metakaolin source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the metakaolin meets all the requirements of AASHTO Designation: M295, including the Effectiveness in contributing to sulfate resistance, Procedure A, listed in AASHTO Designation: M295, Table 4 for Supplementary Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of metakaolin from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed metakaolin shall be incorporated at the rate of 10% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.1.3--Storage. The Contractor shall provide suitable means for storing and protecting the metakaolin against dampness and contamination. Metakaolin which has become partially set, caked, or contains lumps shall not be used.

907-714.07.1.4--Specific Requirements. Metakaolin shall meet the requirements of AASHTO Designation: M 295, Class N with the following modifications:

1. The sum of $SiO_2 + Al_2O_3 + Fe_2O_3$ shall be at least 85%. The Material Safety Data Sheet shall indicate that the amount of crystalline silica, as measured by National Institute of Occupation Safety and Health (NIOSH) 7500 method, after removal of the mica interference, is less than 1.0%.
2. The loss on ignition shall be less than 3.0%.
3. The available alkalies, as equivalent Na_2O , shall not exceed 1.0%.
4. The amount of material retained on a No. 325 mesh sieve shall not exceed 1.0%.
5. The strength activity index at seven (7) days shall be at least 85%.

907-714.07.1.5--Acceptance. With each new lot of material shipped the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the requirements AASHTO Designation: M295, Class N and the requirements of this Subsection.

The Department reserves the right to sample, for check tests, any shipment or lot of metakaolin delivered to a project.

907-714.07.2--Silica Fume.

907-714.07.2.1--General. Silica fume shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Silica fume from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, performance hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with silica fume in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the silica fume during production.

907-714.07.2.2--Source Approval. The approval of each silica fume source shall be on a case by case basis as determined by the State Materials Engineer. In order to obtain approval of a silica fume source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the silica fume meets all the requirements of AASHTO Designation: M307, Table 3, including the Sulfate resistance expansion, listed in the table for Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of silica fume from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed silica fume shall be incorporated at the rate of 8% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.2.3--Storage. The Contractor shall provide suitable means for storing and protecting the silica fume against dampness and contamination. Silica fume which has become partially set, caked, or contains lumps shall not be used.

907-714.07.2.4--Acceptance. With each new lot of material shipped, the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the Chemical and Physical Requirements of AASHTO Designation: M307.

The Department reserves the right to sample, for check tests, any shipment or lot of silica fume delivered to a project.

Delete Subsection 714.11.6 on pages 690 and 691, and substitute the following.

907-714.11.6--Rapid Setting Cementitious Patching Compounds for Concrete Repair. Rapid setting concrete patching compounds must be approved for listing in the Department's "Approved Sources of Materials" prior to use. Upon approval, a product must be recertified every four (4) years to remain on the "Approved Sources of Materials" list. Each product shall be pre-measured and packaged dry by the manufacturer. All liquid solutions included by the manufacturer as components of the packaged material shall be packaged in a watertight container. The manufacturer may include aggregates in the packaged material or recommend the addition of Contractor furnished aggregates.

The type, size and quantity of aggregates, if any, to be added at the job site shall be in accordance with the manufacturer's recommendations and shall meet the requirements of Subsection 703.02 for fine aggregate and Subsection 703.03 for coarse aggregate. Required mixing water to be added at the job site shall meet the requirements of Subsection 714.01.2.

Only those bonding agents, if any, recommended by the manufacturer of the grout or patching compounds may be used for increasing the bond to old concrete or mortar surfaces.

Patching compounds containing soluble chlorides will not be permitted when in contact with steel.

Site preparation, proportioning of materials, mixing, placing and curing shall be performed in accordance with the manufacturer's recommendation for the specific type of application, and the Contractor shall furnish a copy of these recommendations to the Engineer.

Rapid setting cementitious concrete patching compounds, including components to be added at the job site, shall conform to the following physical requirements:

Non-shrink cementitious grouts shall not be permitted for use.

Compressive strength shall equal or exceed 3000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

Bond strength shall equal or exceed 1000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

The material shall have a maximum length change of $\pm 0.15\%$ in accordance with ASTM C 928 for Type R2 concrete or mortar.

The Contractor shall furnish to the Engineer three copies of the manufacturer's certified test report(s) showing results of all required tests and certification that the material meets the specifications when mixed and placed in accordance with the manufacturer's instructions. When the mixture is to be placed in contact with steel, the certification shall further state that the packaged material contains no chlorides. Certified test report(s) and certification shall be furnished for each lot in a shipment.

The proportioning of materials must be approved by the State Materials Engineer and any subsequent change in proportioning must also be approved. A sample of each component shall be submitted to the Engineer along with the quantity or percentage of each to be blended. At least 45 days must be allowed for initial approval.

The proportioning of materials for subsequent lots may be approved by the State Materials Engineer upon receipt of certification from the manufacturer that the new lot of material is the same composition as that originally approved by the Department and that the material has not been changed or altered in any way.

907-714.11.7--Commercial Grout for Anchoring Doweled Tie Bars in Concrete. Before Subsection 714.11.7.1 on page 691, add the following.

Approved Non-“Fast Set” Epoxy anchor systems as specified below may be used for the repair of concrete pavements that do not involve permanent sustained tension applications or overhead applications.

“***Fast Set Epoxy***” may not be used for any Adhesive Anchor Applications. Adhesive Anchor Systems (Fast Set epoxy or otherwise) shall not be used for permanent sustained tension applications or overhead applications. “Fast Set Epoxy” refers to an epoxy produced by the Sika Corporation called Sikadur AnchorFix-3 and repackaged for sale under a variety of names/companies listed at the Federal Highway Administration web site at the following link:

<http://www.fhwa.dot.gov/Bridge/adhesives.cfm>

907-714.11.7.4--Acceptance Procedure. After the last sentence of the first paragraph of Subsection 714.11.4 on page 691, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the “Approved Sources of Materials” list.

907-714.11.8--Epoxy Joint Repair System.

907-714.11.8.1--General. After the last sentence of the first paragraph of Subsection 714.11.8.1 on page 692, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the “Approved Sources of Materials” list.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-715-4

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Roadside Development Materials

Section 715, Roadside Development Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-715.02.2.1--Agricultural Limestone. Delete the first sentence of Subsection 715-02.2.1 on page 704 and substitute the following.

Agricultural limestone shall be either a hard-rock limestone material or a marl or chalk agricultural liming material as addressed in the latest amendment to the Mississippi Agricultural Liming Material Act of 1993, published by the Mississippi Department of Agriculture and Commerce.

907-715.02.2.1.1--Screening Requirements. Delete the first sentence of Subsection 715.02.2.1.1 on page 704.

Delete Subsection 715.02.2.1.2 on page 704 and substitute the following.

907-715.02.2.1.2--Calcium Carbonate Equivalent. Marl or chalk liming material shall not have less than 70% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry weight basis.

907-715.02.2.1.3--Neutralizing Values. Hard-rock limestone material shall have a minimum Relative Neutralizing Value (RNV) of 63.0%, which is determined as follows.

$$\% \text{ RNV} = \text{CCE} \times (\% \text{ passing \#10 mesh} + \% \text{ passing \#50 mesh}) / 2$$

Where: CCE = Calcium Carbonate Equivalent

907-715.03--Seed.

907-715.03.2--Germination and Purity Requirements. Add the following to Table B on page 705.

Name (Kind)	Name (Variety)	Percent Germination	Percent Purity
GRASSES			
Rye Grass	Annual	80	98
Wheat	-	80	98

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-720-2

CODE: (IS)

| DATE: 05/01/2013

| SUBJECT: Pavement Marking Materials

Section 720, Pavement Marking Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

| **907-720.01--Glass Beads.** After the first sentence of Subsection 720.01 on page 729, add the following.

The glass beads shall contain no more than 200 ppm (mg/kg) total concentration for lead, arsenic, or antimony. The manufacture shall furnish the Engineer with a certified test report indicating that the glass beads meet the above requirement.

907-720.02--Thermoplastic Pavement Markings. Delete the first paragraph of Subsection 720.02 on page 730 and substitute the following.

The thermoplastic material shall be lead free and conform to AASHTO Designation: M 249 except the glass beads shall be moisture resistant coated.

After the first sentence of the second paragraph of Subsection 720.02 on page 730, add the following.

In addition, the certification for the thermoplastic material shall state that the material is lead free.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-804-19

DATE: 03/22/2016

SUBJECT: Concrete Bridges and Structures

Delete the second and third paragraphs of Subsection 907.804.03.16.2 on page 37, and substitute the following.

For bridge decks when the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods. Additionally, when the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-19

CODE: (SP)

DATE: 11/10/2015

SUBJECT: Concrete Bridges and Structures

Section 804, Concrete Bridges and Structures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby deleted and replaced as follows.

SECTION 907-804--CONCRETE BRIDGES AND STRUCTURES

907-804.01--Description. This work consists of constructing concrete bridges and structures in accordance with these specifications and in reasonably close conformity with the dimensions, designs, lines, and grades indicated on the plans or established.

Construction of box bridges shall be in accordance with Sections 601 and 602.

907-804.02--Materials.

907-804.02.1--General. Concrete produced and controlled from this specification shall be accepted upon proper certification of concrete production through an approved quality control program and verification by job site acceptance criteria. The Contractor shall develop and implement a quality control program which shall be used to maintain the required properties of concrete. For projects with 1000 cubic yards and more, quality control and acceptance shall be achieved through statistical evaluation of test results. For projects of more than 200 but less than 1000 cubic yards, quality control and acceptance shall be achieved by individual test results. For projects less than or equal to 200 cubic yards, refer to the requirements of TMD-20-05-00-000 "Sampling and Testing of Small Quantities of Miscellaneous Materials" for mixture design and testing requirements.

The materials for concrete bridges and structures, when sampled and tested in accordance with Subsection 700.03, shall meet the requirements of the following Subsections:

Portland Cement	701.01 and 701.02
Blended Cement	907-701.01 and 907-701.04
Admixtures	713.02
Fly Ash	714.05
Ground Granulated Blast Furnace Slag (GGBFS)	907-714.06
Silica Fume	907-714.07.2
Water	714.01.1 and 714.01.2
Fine Aggregate	703.02
Coarse Aggregate	703.03
Lightweight Aggregate	907-703.19
Curing Materials	713.01

Joint Materials	707.01, 707.02, and 707.07
Structural Steel Joints and Bearing Devices	717.01
Bearing Pads	714.10
Wire Rope or Wire Cable for Prestressed Concrete	700.01 and 711.03
Sprayed Finish for Concrete Surface	714.12
Reinforcing Steel	711.02

907-804.02.2--Use, Care, and Handling. The use, care, and handling of materials shall conform to the applicable requirements of Subsection 501.03.10 and the specific requirements of Subsections 907-804.02.4 and 907-804.02.5. Unless otherwise authorized, only fine aggregate or coarse aggregate of one type and from the same source shall be used in the construction of any one unit of a structure. Should the Contractor, with written permission of the Engineer, elect to substitute high early strength cement for cement of the type specified, the Contractor will not receive additional compensation for the substitution.

907-804.02.3--Blank.

907-804.02.4--Care and Storage of Concrete Aggregates. The handling and storage of aggregates shall be such as to prevent segregation or contamination with foreign materials. The Engineer may require that aggregates be stored on separate platforms at satisfactory locations.

When specified, coarse aggregates shall be separated into two or more sizes in order to secure greater uniformity of the concrete mixture. Different sizes of aggregate shall be stored in separate stock piles sufficiently removed from each other to prevent the material at the edges of the piles from becoming intermixed.

907-804.02.5--Storage of Cementitious Materials. All cementitious materials shall be stored in suitable weather-proof buildings or bins. These buildings or bins shall be placed in locations approved by the Engineer. Provision for storage shall be ample, and the shipments of cementitious materials as received shall be stored separately or other provisions made to the satisfaction of the Engineer for easy access for the identification, inspection, and sampling of each shipment as deemed desirable. Stored cementitious materials shall meet the test requirements at any time after storage when a retest is ordered by the Engineer.

On small jobs, open storage consisting of a raised platform and ample waterproof covering may be permitted by written authorization from the Engineer.

When specified, the Contractor shall keep accurate records of deliveries of cementitious materials and of their use in the work. Copies of these records shall be supplied in the form required by the Engineer.

907-804.02.6--Classification and Uses of Concrete. When a specific class of concrete is not specified on the plans or in the contract documents, the structure or parts thereof shall be constructed with the class of concrete as directed by the Engineer.

The classes and their uses are as follows:

- (1) Class AA - Concrete for bridge construction and concrete exposed to seawater.
- (2) Class A - Concrete shown as Class A shall herein be classified as and required to meet the performance criteria of Class AA.
- (3) Class B - General use, heavily reinforced sections, cast-in-place concrete piles, and conventional concrete piles.
- (4) Class C - Massive sections or lightly reinforced sections.
- (5) Class D - Massive unreinforced sections and riprap.
- (6) Class F - Concrete for prestressed members.
- (7) Class FX - Extra strength concrete for prestressed members, as shown on plans.
- (8) Class S - For all seal concrete deposited under water.
- (9) Class DS - Drilled Shaft

907-804.02.7--Blank.

907-804.02.8--Laboratory Accreditation. The Contractor shall be responsible for furnishing the laboratory used to perform concrete quality control tests. The laboratory may be the Contractor's facility, the concrete producer's facility, or a certified independent testing laboratory.

Only laboratories certified by the Mississippi Department of Transportation are qualified to perform material testing. Certification by AASHTO Accreditation Program (AAP) will be acceptable if the laboratory is listed in the latest AAP publication and maintains accreditation to completion of concrete work.

The Contractor's laboratory designated for quality control testing shall have equipment necessary to test aggregates and concrete for the test methods listed in Table 1.

Table 1

AASHTO: R 39	Making and Curing Concrete Test Specimens in the Laboratory
AASHTO: R 60	Sampling Freshly Mixed Concrete
AASHTO: T 2	Sampling Aggregates
AASHTO: T 19	Bulk Density ("Unit Weight") and Voids in Aggregates
AASHTO: T 22	Compressive Strength of Cylindrical Concrete Specimens
AASHTO: T 23	Making and Curing Concrete Test Specimens in the Field
AASHTO: T 27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO: T 84	Specific Gravity and Absorption of Fine Aggregate
AASHTO: T 85	Specific Gravity and Absorption of Coarse Aggregate
AASHTO: T 119	Slump of Hydraulic Cement Concrete
AASHTO: T 121	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
AASHTO: T 152	Air Content of Freshly Mixed Concrete by Pressure Method *
AASHTO: T 196	Air Content of Freshly Mixed Concrete by the Volumetric Method *
AASHTO: T 231	Capping Cylindrical Concrete Specimens
AASHTO: T 248	Reducing Field Samples of Aggregate to Testing Size
AASHTO: T 255	Total Evaporable Moisture Content of Aggregate by Drying

AASHTO: T 325	Standard Method of Test for Estimating the Strength of Concrete in Transportation Construction by Maturity Tests **
ASTM: C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete
ASTM: C 1074	Standard Practice for Estimating Concrete Strength by the Maturity Method **

* Equipment necessary for either pressure or volumetric air content.

** Equipment necessary for estimating concrete strength following the maturity method.

Testing equipment shall have been inspected by the Department or through the AASHTO Accreditation Program. Testing equipment calibration files shall be made available upon request by the Department.

907-804.02.9--Testing Personnel. Technicians testing portland cement concrete, for either acceptance or production control purposes, shall be certified by an accepted certification program. Recertification is required for each Class after five years. Certification requirements are listed in Table 2.

Table 2

Concrete Technician's Tasks	Test Method Required	Certification Required**
Sampling or Testing of Plastic Concrete	AASHTO Designation: R 60, T 23, T 119, T 121, T 152, T 196, and ASTM Designation: C 1064	MDOT Class I certification
Compressive Strength Testing of Concrete Cylinders	AASHTO Designation: T 22 and T 231	MDOT Concrete Strength Testing Technician certification
Sampling of Aggregates	AASHTO Designation: T 2	Work under the supervision of a MDOT Class II certified technician
Testing of Aggregates	AASHTO Designation: T 19, T 27, T 84, T 85, T 248, and T 255	MDOT Class II certification
Proportioning of Concrete Mixtures*	AASHTO Designation: M 157 and R 39	MDOT Class III certification
Interpretation and Application of Maturity Meter Readings	AASHTO Designation: T 325 and ASTM Designation: C 1074	MDOT Class III certification or Two hours maturity method training

* Technicians making concrete test specimens for meeting the requirements of Subsection 907-804.02.10.1.2 shall be MDOT Class I certified and under the direct supervision of an MDOT Class III certified technician.

** MDOT Class I certification encompasses the same test procedures and specifications as ACI Concrete Field Testing Technician-Grade I. MDOT Class II certification encompasses the same test procedures and specifications as ACI Aggregate Testing Technician-Level 1. MDOT Concrete Strength Testing Technician encompasses the same test procedures and specifications as ACI Concrete Strength Testing certification.

Specific requirements for each level of certification are in the latest edition of the Department's *Concrete Field Manual*. Current MDOT Class I, MDOT Class II, and/or MDOT Class III certifications shall be acceptable until those certifications expire. Upon expiration of a current certification, recertification with the certifications listed in Table 2 shall be required. Technicians performing either specific gravity testing of aggregates or compressive strength tests shall be required to either:

- have the required MDOT certification listed in Table 2, or
- have a current MDOT Class III certification or work under the direct supervision of current MDOT Class III technician, and have demonstrated the specific gravity and/or compressive strength test during the inspection of laboratory equipment by the Materials Division, Concrete Section.

907-804.02.10--Portland Cement Concrete Mixture Design. At least 10 days prior to production of concrete, the Contractor shall submit to the Engineer proposed concrete mixture designs complying with the Department's *Concrete Field Manual*. Materials shall be from approved sources meeting the requirements of the Standard Specifications. Proportions for the mixture designs shall be for the class concrete required by the contract plans and shall meet the requirements of the "Master Proportion Table for Structural Concrete Design" listed in Table 3. The concrete producer shall assign a permanent unique mixture number to each mixture design. Each mixture design shall be field verified as required in Subsection 907-804.02.10.3. Acceptable field verification data shall be required for final approval of a mixture design.

All concrete mixture designs will be reviewed by the Materials Division prior to use. Concrete mixture designs disapproved will be returned to the Contractor with a statement explaining the disapproval.

If the Contractor chooses to cure the concrete in accordance with the requirements listed under **Length of Time Defined by Development of Compressive Strength** in Subsection 907-804.03.17, the compressive strength/maturity relationship shall be developed for the mixture design for a minimum of 28 days following the requirements of Subsection 907-804.03.15. The compressive strength/maturity relationship information shall be submitted with the mixture design information.

Table 3
MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN

Class	Coarse Aggregate Size No.*	Maximum Water/Cementitious** Ratio	Specified Compressive Strength (f'_c) psi	Maximum Permitted Slump*** inches	Nominal Total Air Content**** %
AA*****	57 or 67	0.45**	4000	3***	4.5*****
B	57 or 67	0.50	3500	4	4.5
C	57 or 67	0.55	3000	4	4.5
D	57 or 67	0.70	2000	4	4.5
F	67	0.40	5000	3	*****
FX	67	(As per mixture design)	(As shown on plans)	3	*****
S	57 or 67	0.45	3000	8	4.5
DS	67	0.45	4000	***	*****

* Maximum size aggregate shall conform to the concrete mixture design for the specified aggregate. Other smaller coarse aggregate sizes meeting the requirements of Subsection 907-703.03.2.4 may also be used in conjunction with the coarse aggregate sizes listed. Lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 may also be used as a partial replacement for fine aggregate.

** The replacement limits of portland cement by weight by other cementitious materials (such as fly ash, GGBFS, silica fume, or others) shall be in accordance with the values in Subsection 907-701.02. Other hydraulic cements may be used in accordance with the specifications listed in Section 701.

For Class AA concrete for concrete bridge decks, the water / cementitious ratio range shall be 0.43 – 0.45 and the maximum cementitious material content shall be 550 pounds per cubic yard. The “maximum cementitious material content” refers to the total weight of Portland cement, blended hydraulic cement, GGBFS, silica fume, and fly ash.

*** Unless otherwise specified, minus slump requirements shall meet those set forth in Table 3 of AASHTO Designation: M157.

For Class AA concrete for concrete bridge decks the maximum permitted slump may be increased to five (5) inches. Also, for each additional pound of fibers per cubic yard added in excess of the requirement in Note ***** , an additional inch of slump will be allowed up to a maximum permitted slump of eight (8) inches.

For Class AA not used in bridge decks and all other Classes of concrete, the maximum permitted slump may be increased to eight (8) inches.

For Class DS concrete for drilled shafts the slump range shall be 8 inches $\pm$ 1 inch.

***** The tolerance on total air content shall be $\pm$ 1.5%. For Class AA concrete for concrete bridge decks, the nominal total air content may be increased to 6.5%.

***** For Class AA concrete for concrete bridge decks, an approved synthetic structural fiber meeting the requirements of Special Provision 907-711, Synthetic Structural Fiber Reinforcement, shall be incorporated into the mixture at 1.25 times the approved dosage rate.

***** Entrained air is not required except for concrete exposed to seawater. For concrete not exposed to seawater, the total air content shall not exceed 6.0%. For concrete exposed to seawater, the nominal total air content shall be 4.5%.

At least one water-reducing admixture or water-reducing/set-retarding admixture shall be used in all classes of concrete in accordance with the manufacturer's recommended dosage range. Admixtures providing a specific performance characteristic other than those of water reduction or set retardation may be used in accordance with the manufacturer's recommended dosage range. Mixture designs containing accelerating admixtures will not be approved. Any combinations of admixtures shall be approved by the Engineer before their use.

907-804.02.10.1--Proportioning of Portland Cement Concrete Mixture Design. Proportioning of portland cement concrete shall be based on an existing mixture of which the producer has field experience and documentation or based on a recently batched laboratory mixture tested according to the required specifications.

907-804.02.10.1.1--Proportioning on the Basis of Previous Field Experience of Trial Mixtures. Where a concrete production facility has a record, based on at least 10 consecutive strength tests from at least 10 different batches within the past 12 months from a mixture not previously used on Department projects, the standard deviation shall be calculated. The record of tests from which the standard deviation is calculated shall:

- a) Represent similar materials and conditions to those expected. Changes in materials and proportions within the test record shall not have been more closely restricted than those for the proposed work.
- b) Represent concrete produced to meet a specified strength.
- c) Consist of 10 consecutive tests, average of two cylinders per test, tested at 28 days.

The standard deviation, s , shall be calculated as:

$$s = \left[\sum (X_i - \bar{X})^2 \div (N - 1) \right]^{1/2}$$

where:

X_i = the strength result of an individual test

$\bar{X}$ = the average of individual tests in the series

N = number of tests in the series

When the concrete production facility does not have a record of tests for calculation of standard deviation, as required in the above formula, the requirements of Subsection 907-804.02.10.1.2 shall govern.

The required average compressive strength (f'_{cr}) used as the basis for selection of concrete proportions shall conform to the inequality listed below, while using a standard deviation, s , calculated as shown above.

$$\bar{X} \geq f'_{cr}$$

where:

$$f'_{cr} = f'_c + 1.43s$$

where:

f'_c = specified compressive strength of concrete, psi

f'_{cr} = required average compressive strength of concrete, psi

s = standard deviation, psi

1.43 represents the Lower Quality Index necessary to assure that 93% of compressive strength tests are above f'_c .

907-804.02.10.1.2--Proportioning on the Basis of Laboratory Trial Mixtures. When an acceptable record of field test results is not available, concrete proportions shall be established based on laboratory trial mixtures meeting the following restrictions:

- a) The combination of materials shall be those intended for use in the proposed work.
- b) Trial mixtures having proportions and consistencies suitable for the proposed work shall be made using the ACI 211.1 as a guide to proportion the mixture design.
- c) Trial mixtures shall be designed to produce a slump within $\pm 3/4$ inch of the maximum permitted, and for air-entrained concrete, ± 0.5 percent of the maximum total air content. The temperature of freshly mixed concrete in trial mixtures shall be reported.
- d) For each proposed mixture, at least three compressive test cylinders shall be made and cured in accordance with AASHTO Designation: R 39. Each change of water-cement ratio shall be considered a new mixture. The cylinders shall be tested for strength in accordance with AASHTO Designation: T 22 and shall be tested at 28 days.
- e) The required average strength of laboratory trial mixes shall exceed f'_c by 1200 psi for concrete mixture designs less than 5000 psi and by 1400 psi for concrete mixture designs of 5000 psi or more.

- f) The laboratory trial batch mixtures shall have been made within the previous 12 months before being submitted for approval and shall not have been previously used on Department projects.

907-804.02.10.2--Documentation of Average Strength. Documentation that the proposed concrete proportions will produce an average strength equal to or greater than the required average shall consist of the strength test records from field tests or results from laboratory trial mixtures.

907-804.02.10.3--Field Verification of Concrete Mixture Design. Concrete mixture designs will only be tentatively approved pending field verification. The requirements for yield, slump, or total air content shall be successfully met within the first three (3) production days. Mixture designs may be transferred to other projects without additional field verification testing, once the mixture design has passed the field verification process.

The Contractor's Certified Quality Control Technicians shall test each concrete mixture design upon the first placement of the mix. Aggregates and concrete tests during the first placement shall be as follows.

<u>Aggregates</u>	<u>Concrete</u>
Bulk Specific Gravity	Water Content
Moisture	Slump
Gradation	Air Content
	Unit Weight
	Yield

For all Classes of concrete, the mixture shall be verified to yield within 2.0% of the correct volume when all the mix water is added to the batch.

For all Classes of concrete other than DS, F, and FX, the mixture shall produce a slump within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"), and producing a total air content within a minus 1½ percent tolerance of the maximum allowable air content in Table 3.

For Class DS, the slump shall be within the requirements in Note *** below Table 3. For Class DS exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in Note ***** below Table 3. For Class DS not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

For Classes F and FX, the slump shall be within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"). For Classes F and FX exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in

Note ***** below Table 3. For Classes F and FX not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

The mixture shall be adjusted and retested, if necessary, on subsequent placements until the above mentioned properties are met.

If the requirements for yield, slump, or total air content are not met within the first three (3) production days, subsequent field verification testing shall not be permitted on Department projects, and the mixture design shall not be used until the requirements listed above are met. Any mixture design adjustments, changes in the mixture proportions, are to be made by a Class III Certified Technician representing the Contractor. After the mixture design has been verified and adjustments made, verification test results will be reviewed by the Engineer.

907-804.02.10.3.1--Slump Retention of Class DS Concrete Mixture Designs. Prior to concrete placement, the Contractor shall provide test results of a slump loss test using approved methods to demonstrate that the mixture meets the four hour requirement in Subsection 907-803.02.7.1. These tests shall be conducted successfully by an approved testing laboratory within 30 days prior to installation of the trial shaft, with personnel from the Materials Division present. The slump loss test shall be conducted at temperatures and conditions similar to those expected at the job site at the time of the installation of the trial shaft. The sample for the slump loss test shall be from a minimum batch size of four (4) cubic yards of concrete. If the time between the previous successful slump loss test and the installation of the trial shaft exceeds 30 days, another successful slump loss test shall be performed on the first truckload of concrete as part of the installation of the trial shaft. This requirement limiting the time between the previous slump loss test and an installation of the trial shaft also applies to Class DS concrete mixture designs being transferred from another project. During any shaft installation a slump loss test shall be conducted by the Contractor at the direction of the Engineer from the concrete at the site for verification of slump loss requirements using a sample from a minimum batch size of four cubic yards of concrete.

907-804.02.10.4--Adjustments of Mixtures. The mixture design may be adjusted by the Class III Certified Technician representing the Contractor in accordance with the allowable revisions listed in the Department's *Concrete Field Manual*, paragraph 5.7. Written notification shall be submitted to the Engineer a minimum of seven (7) days prior to any source or brand of material change, aggregate size change, allowable material type change, or decrease in any cementitious material content. Any adjustments of the concrete mixture design shall necessitate repeat of field verification procedure as described in Subsection 907-804.02.10.3 and approval by the Engineer.

907-804.02.11--Concrete Batch Plants. The concrete batch plant shall meet the requirements of the National Ready Mixed Concrete Association *Quality Control Manual, Section 3, Plant Certification Checklist* as outlined in the latest edition of the Department's *Concrete Field Manual*. The Contractor shall submit a copy of the approved checklist along with proof of calibration of batching equipment, i.e., scales, water meter, and admixture dispenser, to the Engineer 30 days prior to the production of concrete.

For projects with 1000 cubic yards and more, the concrete batch plant shall meet the requirements for an automatic system capable of recording batch weights. It shall also have automatic moisture

compensation for the fine aggregate. For projects of more than 200 but less than 1000 cubic yards the plant can be equipped for manual batching with a fine aggregate moisture meter visible to the plant operator.

The concrete batch plant shall have available adequate facilities to cool concrete during hot weather.

Mixer trucks to be used on the project are to be listed in the checklist and shall meet the requirements of the checklist.

907-804.02.12--Contractor's Quality Control. The Contractor shall provide and maintain a quality control program that will provide reasonable assurance that all materials and products submitted to the Department for acceptance will conform to the contract requirements, whether manufactured or processed by the Contractor or procured from suppliers, subcontractors, or vendors.

The Contractor's Quality Control program shall implement the minimum quality control requirements shown in Table 4, "CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL". The quality control activities shown in the table are considered to be normal activities necessary to control the production and placing of a given product or material at an acceptable quality level. To facilitate the Department's activities, all completed gradation samples shall be retained for a maximum of sixty (60) days by the Contractor until further disposition is designated by the Department.

The Contractor shall perform, or have performed, the tests required to substantiate product conformance to contract document requirements and shall also perform, or have performed, all tests otherwise required.

The Contractor's Quality Control program shall encompass the requirements of AASHTO Designation: M 157 into concrete production and control, equipment requirements, testing, and batch ticket information. The requirement of AASHTO Designation: M 157, Section 11.7 shall be followed except, on arrival to the job site, a maximum of 1½ gallons per cubic yard shall be allowed to be added. Water shall not be added at a later time. Job site adjustment of a batch using chemical admixtures or the mechanical adjustment of a batch may be performed by the Contractor if the requirements of Subsection 907-804.02.12.1.1 have been satisfactorily addressed in the Quality Control Plan. If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

The Contractor's quality control tests shall be documented and shall be available for review by the Engineer throughout the life of the contract.

As set out in these specifications, quality control sampling and testing performed by the Contractor will be used by the Department for determination of acceptability of the concrete.

The Contractor shall maintain standard equipment and qualified personnel as required to assure conformance to contract requirements.

907-804.02.12.1--Quality Control Plan. The Contractor shall prepare a Quality Control Plan which shall identify the personnel responsible for the Contractor's quality control including the company official who will act as liaison with Department personnel. The Quality Control Plan shall be submitted in writing to the Engineer for approval 30 days prior to the production of concrete.

The class(es) of concrete involved will be listed separately. If an existing mixture design(s) is to be used, the mixture design number(s) as previously approved shall be listed.

It is intended that sampling and testing be in accordance with standard methods and procedures, and that measuring and testing equipment be standard and properly calibrated. If alternative sampling methods and procedures, and inspection equipment are to be used, they shall be detailed in the Quality Control Plan.

907-804.02.12.1.1--Elements of Plan. The Plan shall address all elements that affect the quality of the structural concrete including, but not limited to, the following items:

- 1) Stockpile Management
- 2) Procedures for Corrective Actions for Non Compliance of Specifications
- 3) Procedure for Controlling Concrete Temperatures
- 4) Job Site Batch Adjustments by Addition of Chemical Admixtures:

The Plan shall address if the Contractor intends to adjust either the slump and/or total air content of a batch on the job site by adding chemical admixture(s) to a batch. The Contractor shall include the names of the personnel designated to perform this batch adjustment, the equipment used to add the chemical admixture(s), and the procedure by which the batch adjustment will be accomplished. Only the Contractor's designated personnel shall adjust a batch. Only calibrated dispensing equipment shall be used to add chemical admixture(s) to a batch. Only the procedure described in this section of the Plan shall be utilized.

If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

If the Contractor elects to utilize Job Site Batch Adjustments by Addition of Chemical Admixture within Item 2, Procedures for Corrective Actions for Non Compliance of Specifications, to adjust batches which do not meet the minimum specification requirements for slump and/or total air content, no more than three batches on any one project shall be allowed to be adjusted regardless of the number of mixtures associated with the project.

- 5) Construction of Concrete Bridge Decks, including the following:

- the description of the equipment used for placing concrete on the bridge deck in accordance with Subsection 907-804.03.6 and, as applicable, Subsections 907-804.03.7 and 907-804.03.8 including any accessories added to the pump to ensure the entrained air in the concrete mixture remains entrained during pumping and depositing of the concrete mixture,
- the description of and the number of pieces of equipment used to consolidate the concrete in accordance with Subsection 907-804.03.6.2,
- the description of the equipment used to finish the bridge deck in accordance with Subsection 907-804.03.19.7,
- the plan for ensuring a continuous rate of finishing the bridge deck without delaying the application of curing materials within the time specified in Subsection 907-804.03.17, including ensuring a continuous supply of concrete throughout the placement with an adequate quantity of concrete to complete the deck and filling diaphragms and end walls in advance of deck placement,
- the plan for applying the curing materials within the time specified in Subsection 907-804.03.17,
- the description of the powered fogging equipment in accordance with Subsection 907-804.03.17,
- a sample of the documentation used as the daily inspection report for ensuring maintenance of the continuous wet curing in accordance with Subsection 907-804.03.17, as required,
- the description of the equipment used to apply the liquid membrane, including but not limited to, the nozzles, pumping/pressurization equipment, and liquid membrane tanks, in accordance with Subsection 907-804.03.17,
- the method for determining the rate of applied liquid membrane meets the application rate requirements in accordance with Subsection 907-804.03.17,
- a sample of the documentation used for the application rate verification of the liquid membrane in accordance with Subsection 907-804.03.17.

6) Mechanical Adjustment of Trucks

907-804.02.12.2--Personnel Requirements. The Contractor's Designated Certified Technician shall perform and use quality control tests and other quality control practices to assure that delivered materials and proportioning meet the requirements of the mixture design including temperature, slump, air content, and strength and shall periodically inspect all equipment used in transporting, proportioning, and mixing.

The Contractor's Designated Technician shall periodically inspect all equipment used placing, consolidating, finishing, and curing to assure it is operating properly and that placement, consolidation, finishing, and curing conform to the mixture design and other contract requirements.

907-804.02.12.3--Documentation. The Contractor shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations made, the number and type of deficiencies found, date and time of samples taken, the quantities approved and rejected, and the nature of corrective action taken as appropriate. The Contractor's

documentation procedures will be subject to approval of the Department prior to the start of the work and to compliance checks during the progress of the work.

All conforming and non-conforming results shall be kept complete and shall be available at all times to the Department during the performance of the work. Forms shall be on a computer-acceptable medium. Batch tickets and gradation data shall be documented in accordance with Department requirements.

Batch tickets shall contain all the information in AASHTO Designation: M157, Section 16 including the additional information in Subsection 16.2 with the following exception: the information listed in paragraphs 16.2.7 and 16.2.8 is not required. All material added to a batch by both the batch plant or added manually shall be documented on the ticket. Batch tickets shall also contain the concrete producer's permanent unique mixture number assigned to the concrete mixture design. Copies shall be submitted to the Department as the work progresses.

Test data for portland cement concrete, including gradation, shall be charted in accordance with the applicable requirements.

The Contractor may use additional control charts as deemed appropriate. It is normally expected that testing and charting will be completed within 24 hours after sampling.

All records documenting the Contractor's quality control tests shall become the property of the Department upon completion of the work.

907-804.02.12.4--Corrective Action. The Contractor shall take prompt action to correct conditions that have resulted, or could result, in the submission to the Department of materials and products that do not conform to the requirements of the contract documents. All corrective actions shall be documented.

907-804.02.12.5--Non-Conforming Materials. The Contractor shall establish and maintain an effective and positive system for controlling non-conforming material, including procedures for its identification, isolation and disposition. Reclaiming or reworking of non-conforming materials shall be in accordance with procedures acceptable to the Department.

All non-conforming materials and products shall be positively identified to prevent use, shipment, and intermingling with conforming materials and products. Holding areas, mutually agreeable to the Department and the Contractor, shall be provided by the Contractor.

TABLE 4
CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL

Portland Cement Concrete		
Control Requirement	Frequency	AASHTO/ASTM Designation
A. PLANT AND TRUCKS 1. Mixer Blades 2. Scales a. Tared b. Calibrate c. Check Calibration 3. Gauges & Meters - Plant & Truck a. Calibrate b. Check Calibration 4. Admixture Dispenser a. Calibrate b. Check Operation & Calibration	Monthly Daily Every 6 months Weekly Every 6 months Weekly Every 6 months Daily	
B. AGGREGATES 1. Sampling 2. Fine Aggregate a. Gradation / FM b. Moisture c. Specific Gravity / Absorption 3. Coarse Aggregates a. Gradation b. Moisture c. Specific Gravity / Absorption	250 yd ³ concrete Check meter against test results weekly 2500 yd ³ concrete 250 yd ³ concrete Minimum of once daily or more as needed to control production. Check meter against test results weekly. 2500 yd ³ Concrete	T 2 T 27 T 255 T 84 T 27 T 255 T 85
C. PLASTIC CONCRETE 1. Sampling 2. Air Content 3. Slump 4. Compressive Strength 5. Yield 6. Temperature	First load then one per 50 yd ³ First load then one per 50 yd ³ A minimum of one set (three cylinders) for each 100 yd ³ inclusive and one set for each additional 100 yd ³ or fraction thereof for each class concrete delivered and placed on a calendar day from a single supplier. A test shall be the average of three cylinders. Each 400 yd ³ With each sample	T 141 T 152 or T 196 T 119 T 22, T 23, T 231 T 121 C 1064

907-804.02.13--Quality Assurance Sampling and Testing. Quality Assurance (QA) inspection and testing will be provided by the Department to assure that the Contractor's Quality Control (QC) testing meets the requirements of these specifications.

Acceptance of the material is based on the inspection of the construction, monitoring of the Contractor's QC program, QC and QA test results per Subsection 907-804.02.13.1, and the comparison of the QA test results with the QC test results. The Department may use the results of the Contractor's QC tests as a part of the acceptance procedures instead of the results of QA tests, provided:

- a) The Department's inspection and monitoring activities indicate that the Contractor is following the approved QC program and, respectively,
- b) For aggregates, the results from the Contractor's QC and the Department's QA testing of aggregate gradations compare by both meeting the aggregate type's gradation requirements;
- c) For concrete, the Contractor's QC and Department's QA testing of concrete compressive strengths compare when using the data comparison computer program with an alpha value of 0.01 for projects with 1000 cubic yards and more; or, strength comparisons are within 990 psi for projects of more than 200 but less than 1000 cubic yards.

The minimum frequency for QA testing of aggregate and plastic concrete by the Department will follow the frequencies listed in Table 5, "DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE".

TABLE 5
DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE

Quality Assurance Tests	Frequency	AASHTO/ASTM Designation
A. AGGREGATES		
1. Sampling		T 2
2. Fine Aggregate Gradation and FM	250 yd ³ concrete	T 27
3. Coarse Aggregates Gradation	250 yd ³ concrete	T 27
B. PLASTIC CONCRETE		
1. Sampling		T 141
2. Air Content	Every 100 yd ³	T 152 or T 196
3. Slump	Every 100 yd ³	T 119
4. Compressive Strength	One set (three cylinders) for every 100 yd ³ inclusive. A test shall be the average of three cylinders.	T 22, T 23, T 231
5. Temperature	With each sample	C 1064

Periodic inspection by the Department of the Contractor's QC testing and production will continue through the duration of the project. Weekly reviews will be made of the Contractor's QC records and charts.

For aggregates, comparison of data of the Contractor's QC aggregate gradation test results to those of the Department's QA aggregate gradation test results will be made monthly during concrete

production periods according to Department Standard Operating Procedures. When it is determined that the Contractor's QC test results of aggregate gradations are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the aggregates and the Department's QA testing frequency of aggregates may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC aggregate gradation test results fail to compare to those of the Department's QA aggregate gradation test results, Department testing for aggregate gradations will revert to the frequency shown in Table 5 for aggregates until the Contractor's and Department's aggregate gradation test data compare.

For concrete compressive strength, comparison of data of the Contractor's QC compressive strength test results to those of the Department's QA compressive strength test results will be made monthly during concrete production periods according to Department's *Concrete Field Manual*. When it is determined that the Contractor's QC test results of concrete compressive strengths are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the concrete and the Department's QA testing frequency of concrete compressive strengths may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC compressive strength test results fail to compare to those of the Department's QA compressive strength test results, Department testing will revert to the frequency shown in Table 5 for plastic concrete until the Contractor's and Department's compressive strength test data compare.

907-804.02.13.1--Job Control Testing.

907-804.02.13.1.1--Sampling. Sampling of concrete mixture shall be performed in accordance with the latest edition of the Department's *Concrete Field Manual*.

907-804.02.13.1.2--Slump. Slump of plastic concrete shall meet the requirements of Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.3--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.4--Yield. If the yield of the concrete mix design is more than plus or minus three percent ($\pm 3\%$) of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus three percent ($\pm 3\%$). If batching of the proportions of the mixture design varies outside the batching tolerance range of the originally approved proportions by more than the tolerances allowed in Subsection 907-804.02.12, the new proportions shall be field verified per Subsection 907-804.02.10.3.

907-804.02.13.1.5--Temperature. Cold weather concreting shall follow the requirements of Subsection 907-804.03.16.1. Hot weather concreting shall follow the requirements of Subsection

907-804.03.16.2. Concrete with a temperature more than the maximum allowable temperature shall be rejected and not used in Department work.

The maximum acceptance temperature for Class DS concrete mixtures is 95°F.

The maximum acceptance temperature of Class C concrete mixtures is 100°F for mixtures meeting the cement replacement requirements of Subsection 907-701.02.2. For Class C concrete mixtures that do not meet the cement replacement requirements of Subsection 907-701.02.2, the maximum acceptance temperature is 95°F.

The maximum acceptance temperature for all other concrete mixtures meeting the cement replacement requirements of Subsection 907-701.02.2 is 95°F. The maximum acceptance temperature for all other concrete mixtures which do not meet the cement replacement requirements of Subsection 907-701.02.2 is 90°F.

907-804.02.13.1.6--Compressive Strength. Standard cured concrete compressive strength tests shall conform to the specified strength (f'_c) listed in the specifications. Concrete represented by compressive strength test below the specified strength (f'_c) may be removed and replaced by the Contractor. If the Contractor elects not to remove the material, it will be evaluated by the Department as to the adequacy for the use intended. All concrete evaluated as unsatisfactory for the intended use shall be removed and replaced by the Contractor at no additional cost to the Department. For concrete allowed to remain in place, reduction in payment will be as follows:

Projects with 1000 Cubic Yards and More. When the evaluation indicates that the work may remain in place, a statistical analysis will be made of the QC and QA concrete test results. If this statistical analysis indicates at least 93% of the material would be expected to have a compressive strength equal to or greater than the specified strength (f'_c) and 99.87% of the material would be expected to have a compressive strength at least one standard deviation above the allowable design stress (f_c), the work will be accepted. If the statistical analysis indicates that either of the two criteria are not met, the Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c - (f_c + s)} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

s = standard deviation, psi*

f_c = allowable design stress, psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

* Standard deviation used in the above reduction of pay formula shall be calculated from the applicable preceding compressive strengths test results plus the individual compressive strength below f'_c . If below f'_c strengths occur during the project's first ten compressive strength tests, the standard deviation shall be calculated from the first ten compressive strength tests results.

Projects of More Than 200 but Less Than 1000 Cubic Yards. When the evaluation indicates that the work may remain in place, a percent reduction in pay will be assessed based on a comparison of the deficient 28-day test result to the specified strength. The Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

907-804.02.14--Dispute Resolution. Disputes over variations between Contractor's QC test results and the Department's QA test results shall be resolved at the lowest possible level using the latest edition of the Department's *Concrete Field Manual*. When there are significant discrepancies between the QC test results and the QA test results, the Contractor's QC Manager, the Project Engineer, and/or the District Materials Engineer shall look for differences in the procedures, and correct the inappropriate procedure before requesting a third party resolution.

If the dispute cannot be resolved at the project or District level, the Department's Materials Division will serve as a third party to resolve the dispute. The Materials Division's decision shall be binding.

The Contractor shall be responsible for the cost associated with the third party resolution if the final decision is such that the Department's QA test results were correct. Likewise, the Department will be responsible for the cost when the final decision is such that the Contractor's QC test results were correct.

907-804.03--Construction Requirements.

907-804.03.1--Measurement of Materials.

907-804.03.1.1--General. The accuracy for measuring materials shall be in accordance with AASHTO Designation: M 157.

907-804.03.1.2--Measurement by Weighing. Except when otherwise specified or authorized, the materials shall be measured by weighing. The apparatus provided for weighing materials shall be

suitably designed and constructed for this purpose. Cementitious materials and aggregates shall be weighed separately. Cement in standard bags need not be weighed, but bulk cement and other cementitious materials shall be weighed. The mixing water shall be measured by volume or by weight. All measuring devices shall be subject to approval.

907-804.03.2--Blank.

907-804.03.3--Blank.

907-804.03.4--Hand Mixing. Hand mixing of concrete will not be allowed.

907-804.03.5--Delivery. The plant supplying concrete shall have sufficient capacity and transporting apparatus to ensure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper continuity in handling, placing, and furnishing of the concrete. The rate shall be such that the interval between batches shall not exceed 20 minutes. The methods of delivering and handling the concrete shall be that which will facilitate placing with minimum re-handling and without damage to the structure or the concrete.

907-804.03.6--Handling and Placing Concrete.

907-804.03.6.1--General. Prior to placing concrete, all reinforcement shall have been accurately placed in the position shown on the plans and fastened as set out in Section 805. All sawdust, chips, and other construction debris and extraneous matter shall have been removed from the interior of the forms. Temporary struts, braces, and stays holding the forms in correct shape and alignment shall be removed when the concrete placing has reached an elevation rendering their service unnecessary. These temporary members shall be entirely removed from the forms and shall not be buried in the concrete.

No concrete shall be placed until the forms and reinforcement have been inspected.

Except as provided for truck mixers and truck agitators, concrete shall be placed in the forms within 30 minutes after the time that the cement is first added to the mixture.

Concrete shall be placed so as to avoid segregation of materials and displacement of reinforcement. The use of troughs, chutes, and pipes over 25 feet in length for gravity conveyance of concrete to the forms, will not be permitted except when authorized by the Engineer and subject to the production of quality concrete.

Only approved mechanical conveyors will be permitted.

Open troughs and chutes shall be metal or metal lined. The use of aluminum pipes, chutes, or other devices made of aluminum that come into direct contact with the concrete shall not be used. Where steep slopes are required, the chutes shall be equipped with baffles or be in short sections that change the direction of movement.

All chutes, troughs, and pipes shall be kept clean and free from coatings of hardened concrete by thoroughly flushing with water after each run. Water used for flushing shall be discharged clear of the structure.

When placing operations involve dropping the concrete more than five feet, it shall be deposited through sheet metal or other approved pipes to prevent segregation and unnecessary splashing. The pipes shall be made in sections to permit discharging and raising as the placement progresses. A non-jointed pipe may be used if sufficient openings of the proper size are provided to allow for the flow of the concrete into the shaft. As far as practicable, the pipes shall be kept full of concrete during placing, and their ends shall be kept buried in the newly placed concrete.

Except as herein provided, concrete shall be placed in horizontal layers not more than 12 inches thick. When, with the Engineer's approval, less than the complete length of a layer is placed in one operation, it shall be terminated in a vertical bulkhead. Each layer shall be placed and compacted before the preceding layer has taken its initial set and shall be compacted so as to avoid the formation of a construction joint with the preceding layer.

If the Department determines that there is an excessive number of projections, swells, ridges, depressions, waves, voids, holes, honeycombs, or other defects in the completed structure, removal of the entire structure may be required as set out in Subsection 105.12.

907-804.03.6.2--Consolidation. Immediately after depositing the concrete mixture, the concrete mixture shall be thoroughly consolidated by the use of approved mechanical vibrators and suitable spading tools. Only concrete mixture which has not achieved initial set shall be consolidated. Hand spading alone will be permitted on small structural members such as railing, small culvert headwalls, and as necessary to ensure smooth surfaces and dense concrete along form surfaces, in corners, and in locations impossible to reach with vibrators. When hand spading is used for consolidation, a sufficient number of workmen with spading tools shall be provided. For hand spading, flush a thin layer of mortar to all the surfaces and thoroughly and satisfactorily consolidate the concrete.

The Contractor shall conduct operations of depositing and consolidating the concrete mixture such that the operation produces concrete which is uniformly smooth and dense, having no honeycombing or pockets of segregated aggregate.

Movement of personnel through the consolidated concrete shall not be permitted. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.

907-804.03.6.2.1--Requirements for Vibrators. Mechanical vibrators shall be subject to the following:

1. To verify compliance with these requirements, the Contractor shall provide the Engineer with a copy of the manufacturer's specifications for each type and brand of vibrator used on the project.

2. The Contractor shall provide a sufficient number of personnel with vibrators to properly consolidate each batch immediately after the concrete is placed in the forms. The Contractor shall provide at least one stand-by vibrator and required power source.
3. Concrete having been consolidated shall not be walked in or through. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.
4. Internal vibrators shall be of the spud or tube type, meeting the following characteristics and performance:
 - a. The diameter of the head of the vibrator shall be 1¼ to 2½ inches.
 - b. The frequency of vibration shall be 8000 to 12000 vibrations per minute (Hz) while operating in the concrete.
 - c. The average amplitude shall be 0.025 to 0.05 inch while operating in air.
 - d. The minimum radius of influence shall be seven (7) inches.
 - e. The length of the vibrator head shall be nearly equal to the depth of the layer of concrete placed.
5. When the reinforcing steel is coated with epoxy, internal vibrators with heads of rubber or other resilient material shall be used. Rubber covers securely fastened over steel heads shall be acceptable.
6. For consolidation of concrete used in concrete bridge decks, the following additional requirements shall apply:
 - a. Only internal vibration shall be used.
 - b. Internal vibrators shall all be of the same type and size.
 - c. The configuration of the internal vibrators shall meet the requirements of Subsection 907-804.03.6.2.3.

907-804.03.6.2.2--Operation of Internal Vibration. Mechanical vibrators used for internal vibration shall be operated as follows:

1. Vibrators shall not be dragged or moved laterally through the concrete to transport concrete. Vibrators shall not be used in such a manner that the concrete segregates or forms pockets of grout. Vibrators shall not be applied directly or through the reinforcement to sections or layers of concrete which have taken initial set.
2. Vibrators shall only be inserted into the concrete while operating and at the point of placement to consolidate the concrete for such a length of time that there is a general cessation in the escape of large entrapped air bubbles at the surface.
3. Vibrators shall be inserted slowly into the concrete and allowed to penetrate into the concrete under their own weight.
4. Vibrators shall be inserted into the concrete while they are in a vertical position with enough flexibility to work themselves around the reinforcing steel.
5. The head of the vibrator shall be completely submerged in the concrete for a time of consolidation between 3 and 15 seconds prior to removal, unless otherwise defined by the Engineer.
6. For consolidation of two or more layers of concrete, the vibrator shall be inserted into the bottom most layer at least six (6) inches. The vibrator shall be manipulated in a series of up-and-down motions to knit the layers together.

7. Vibrators shall be removed slowly from the concrete after the consolidation has been accomplished. However, once the head of the vibrator has become only partially immersed in the concrete, vibrators shall be removed rapidly.
8. The insertions of the vibrators shall be systematically spaced such that the entire surface of the concrete comes under the influence of the vibrator during consolidation. This includes areas around the reinforcing steel, imbedded fixtures, the corners and angles of forms, and any irregular areas. The distance between insertions shall not exceed 1.5 times the radius of influence such that the area visibly affected by the vibrator overlaps the adjacent, just-vibrated area.
9. For additional information, refer to ACI 309-07, Chapter 7, Sections 7.1 through 7.3

907-804.03.6.2.3--Method of Consolidation. It is anticipated the Contractor will accomplish consolidation by internal vibration using one of the following two methods: vibrators mounted on a mechanical device or an orchestrated effort utilizing personnel. Regardless of the chosen method, the method shall be included in the QCP in accordance with Subsection 907-804.02.12.1.1.5 and shall only receive tentative approval until the method is demonstrated as effectively meeting the requirements of Subsection 907-804.03.6.2.

907-804.03.6.3--Discontinuance of Placing. When placing is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints insofar as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel. Where a "feather edge" might be produced at a construction joint, such as in the sloped top surface of a wing wall, an inset form work shall be used in the preceding layer to produce a blocked out portion that will provide an edge thickness of at least six inches (6") in the succeeding layer. Work shall not be discontinued within 18 inches of the top of any face unless provision has been made for a coping less than 18 inches thick. In this case and if permitted by the Engineer, the construction joint may be made at the underside of the coping.

Immediately following the discontinuance of placing concrete, all accumulations of mortar splashed on the reinforcement and the surface of forms shall be removed. Dried mortar chips and dust shall not be puddled into the unset concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to break or injure the concrete-steel bond at and near the surface of the concrete while cleaning the reinforcement. After initial set the forms shall not be jarred, and no strain shall be placed on the ends of projecting reinforcement until the concrete has sufficiently set to ensure against any damage by such jarring or strain.

907-804.03.6.4--Placing Bridge Concrete. The method and sequence of placing concrete shall conform to the provisions and requirements set forth for the particular type of construction.

907-804.03.6.4.1--Foundations and Substructures. Concrete seals shall be placed in accordance with Subsection 907-804.03.9. All other concrete for foundations shall be poured in the dry unless otherwise stipulated or authorization is given in writing by the Engineer to do otherwise. Concrete shall not be placed in foundations until the foundation area has been inspected and approved.

Unless otherwise specified, the placement of concrete in the substructure shall be in accordance with the general requirements of Subsection 907-804.03.6.

Unless otherwise directed, concrete in columns shall be placed in one continuous operation, and shall be allowed to set at least 12 hours before the caps are placed.

907-804.03.6.4.2--Superstructure. For simple spans, concrete shall preferably be deposited by beginning at the center of the span and working toward the ends. For continuous spans, concrete shall be deposited as shown on the plans. Concrete in girders shall be uniformly deposited for the full length of the girder and brought up evenly in horizontal layers. Concrete in areas below the bridge deck but being deposited at the same time as concrete for the bridge deck, like a diaphragm, shall be placed and consolidated sufficiently ahead of placing the concrete for the bridge deck such that the placing, consolidating, finishing, and curing of concrete for the bridge deck shall not be impeded or slowed.

Unless otherwise permitted by the Engineer, concrete shall not be placed in the superstructure until the column forms have been stripped sufficiently to determine the character of the concrete in the columns. Unless otherwise permitted by the Engineer, the load of the superstructure shall not be placed on pile bents until the caps have been in place at least seven (7) days and shall not be placed on other types of bents until the bents have been in place at least 14 days.

In placing concrete around steel shapes, it shall be placed on one side of the shape until it flushes up over the bottom flange of the shape on the opposite side, after which it shall be placed on both sides to completion.

Concrete in girder haunches less than three feet (3') in height shall be placed at the same time as that in the girder stem. Whenever a haunch or fillet has a height of three feet (3') or more at the abutment or columns, the haunch and the girder shall be poured in three successive stages: first, up to the lower side of the haunch; second, to the lower side of the girder; and third, to completion.

Except when intermediate construction joints are specified, concrete in slab, T-beam, or deck-girder spans shall be placed in one continuous operation for each span.

The floors and girders of through-girder superstructures shall be placed in one continuous operation unless otherwise specified, in which case special shear anchorage shall be provided to ensure monolithic action between girder and floor.

Concrete in box girders shall be placed as shown on the plans.

Concrete shall not be chuted directly into the forms of the span and shall be placed continuously with sufficient speed to be monolithic and to allow for finishing before initial set.

907-804.03.6.4.3--Bridge Deck. When using the Transverse Method in accordance with Subsection 907-804.03.19.7.3, the period of time between concrete placement and completion of the final curing shall be kept to a minimum, as directed by the Engineer.

907-804.03.7--Pneumatic Placing. Pneumatic placing of concrete will be permitted only if specified in the contract or if authorized by the Engineer. The equipment shall be so arranged that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by pneumatic means the equipment shall be suitable in kind and adequate in capacity for the work. The machine shall be located as close as practicable to the place of deposit. The position of the discharge end of the line shall not be more than 10 feet from the point of deposit. The discharge lines shall be horizontal or inclined upwards from the machine. At the conclusion of placement the entire equipment shall be thoroughly cleaned.

907-804.03.8--Pumping Concrete. Placement of concrete by pumping will be permitted only if specified in the contract or if authorized in writing by the Engineer. If used, the equipment shall be arranged so that no vibrations result which might damage freshly placed concrete.

Where concrete mixture is conveyed and placed by mechanically applied pressure (pumping), the equipment shall be suitable in kind and adequate in capacity for the work. The Contractor shall select concrete mixture proportions such that the concrete mixture is pumpable and placeable with the selected equipment.

The pumping equipment shall be thoroughly cleaned prior to concrete placement. Excess form release agent shall be removed from the concrete pump hopper. The Contractor shall prime the pump at no additional cost to the Department by pumping and discarding enough concrete mixture to produce a uniform mixture exiting the pump. At least 0.25 cubic yard of concrete mixture shall be pumped and discarded to prime the pump. Only concrete mixture shall be added directly into the concrete pump hopper after placement has commenced. If anything other than concrete mixture is added to the concrete pump hopper, all concrete mixture in the concrete pump hopper and pump line shall be discarded and the pump re-primed at no additional cost to the Department.

The discharge end of the pump shall be of such a configuration that the concrete does not move in the pump line under its own weight. The intent of this requirement is to ensure that entrained air in the concrete mixture remains entrained during pumping and depositing the concrete mixture. This shall be accomplished with one or both of the following:

- a minimum 10-foot flexible hose attached to the discharge end of a steel reducer having a minimum length of three (3) feet and a minimum reduction in area of 20% which is attached to the discharge end of the pump line, or
- a flexible reducing hose to the discharge end of the pumpline with a minimum reduction in area of 20% over a minimum 10-foot hose length.

Regardless of the configuration chosen, the Contractor shall ensure that the concrete is pumped and does not free-fall more than five (5) feet within the entire length of pump line and after discharge from the end of pump line.

The Contractor shall not have any type of metal elbow, metal pipe, or other metal fitting within five (5) feet of any person during discharge of concrete mixture.

Boom pumps shall have a current Concrete Pump Manufacturers Association's ASME/ANSI B30.27 certification. Equipment added to the boom and pump line shall meet the pump manufacturer's specifications and shall not exceed the manufacturer's maximum recommended weight limit for equipment added to the boom and pump line.

The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe line, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned.

The use of aluminum pipe as a conveyance for the concrete will not be permitted.

907-804.03.9--Depositing Concrete Under Water. Concrete shall not be deposited in water except with the approval of the Engineer.

Concrete deposited under water shall be Class S.

Concrete deposited under water shall be carefully placed in a compact mass in its final position by means of a tremie, a bottom dump bucket, or other approved method and shall not be disturbed after being deposited. Special care shall be exercised to maintain still water at the point of deposit. No concrete shall be placed in running water and all form work designed to retain concrete under water shall be water-tight. The consistency of the concrete shall be carefully regulated, and special care shall be exercised to prevent segregation of materials.

Concrete seals shall be placed continuously from start to finish, and the surface of the concrete shall be kept as nearly horizontal as practicable at all times. To ensure thorough bonding, each succeeding layer of a seal shall be placed before the preceding layer has taken initial set.

When a tremie is used, it shall consist of a tube having a diameter of at least 10 inches and constructed in sections having flanged couplings fitted with gaskets. The means of supporting the tremie shall be such as to permit the free movement of the discharge over the entire top surface of the work and to permit it to be lowered rapidly when necessary to choke off or retard the flow of concrete. The discharge end shall be closed at the start of the work so as to prevent water entering the tube and shall be entirely sealed. The tremie tube shall be kept full to the bottom of the hopper. When a batch is dumped into the hopper, the flow of concrete shall be induced by slightly raising the discharge end, always keeping it in the deposited concrete. The flow is then stopped by lowering the tremie. The flow shall be continuous until the work is completed.

Depositing of concrete by the drop bottom bucket method shall conform to the following: The top of the bucket shall be open. The bottom doors shall open freely downward and outward when tripped. The bucket shall be completely filled and slowly lowered to avoid backwash. It shall not be dumped until it rests on the surface upon which the concrete is to be deposited and when discharged shall be withdrawn slowly until well above the concrete.

Dewatering may proceed when the concrete seal is sufficiently hard and strong. As a general rule, this time will be 48 hours for concrete made with high-early-strength cement and three days for concrete made with other types of cement. All laitance and other unsatisfactory material shall be removed from the exposed surface by scraping, chipping, or other means which will not injure the surface of the concrete.

907-804.03.10--Construction Joints.

907-804.03.10.1--General. Unless otherwise approved by the Engineer, construction joints shall be made only where located on the plans or shown in the pouring schedule. If not detailed on the plans, or in the case of emergency, construction joints shall be placed as directed by the Engineer. Shear keys or inclined reinforcement shall be used where necessary to transmit shear or to bond the two sections together.

For continuous spans, bridge deck concrete shall be deposited as shown on the plans. Deviation from the pouring schedule shown in the plans is not permitted.

907-804.03.10.2--Bonding. Before depositing new concrete on or against concrete which has hardened, the forms shall be retightened. The surface of the hardened concrete shall be roughened as required by the Engineer and in a manner that will not leave loosened particles of aggregate or damaged concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance and saturated with water. When directed by the Engineer, the cleaned and saturated surfaces, including vertical and inclined surfaces, shall first be thoroughly covered with a coating of mortar or neat cement grout against which the new concrete shall be placed before the grout has attained its initial set.

The placing of concrete shall be carried continuously from joint to joint. The face edges of all joints which are exposed to view shall be carefully finished, true to line and elevation.

In order to bond successive courses suitable depressed or raised keys of the designated size shall be constructed. Raised keys shall be monolithic with the concrete of the lower course.

907-804.03.11--Concrete Exposed to Seawater. Unless otherwise specifically provided, concrete for structures exposed to seawater shall be Class AA concrete as referenced in Subsection 907-804.02.10. The clear distance from the face of the concrete to the nearest face of reinforcing steel shall be at least four inches. The mixing time and the water content shall be carefully controlled and regulated so as to produce concrete of maximum impermeability. The concrete shall be thoroughly compacted, and stone pockets shall be avoided. No construction joints shall be formed between the levels of extreme low water and extreme high water as determined by the Engineer. Between these levels, seawater shall not come in direct contact with the new concrete until at least 30 days have elapsed. The surface concrete as left by the forms shall be left undisturbed.

907-804.03.12--Blank.

907-804.03.13--Falsework. The Contractor shall submit to the Engineer four copies of structural design analysis and detail drawings, which show the method of falsework or centering. These designs and detail plans shall be prepared and bear the seal of a Registered Professional Engineer with experience in falsework design.

Falsework plans shall include falsework elevations together with all other dimensions and details which is considered necessary for the construction. Other pertinent data needed is size and spacing of all falsework members and minimum bearing requirements for false piles.

Upon completion of falsework erection, the Registered Professional Engineer shall certify that the erected falsework is capable of supporting the load for construction.

Falsework piling shall be spaced and driven so that the bearing value of each pile is sufficient to support the load that will be imposed upon it. The bearing value of the piles should be calculated according to the appropriate formula given in Section 803.

For designing falsework and centering, a weight of 150 pounds per cubic foot shall be assumed for green concrete. All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads without appreciable settlement or deformation. The Contractor may be required to employ screw jacks or hardwood wedges to take up slight settlement in the falsework either before or during the placing of concrete. An allowance shall be made for anticipated compressibility of falsework and for the placement of shims, wedges, or jacks to produce the permanent structural camber shown on the plans. If during construction, any weakness develops and the falsework shows any undue settlement or distortion, the work shall be stopped, the part of the structure affected removed, and the falsework strengthened before work is resumed. Falsework which cannot be founded on a satisfactory footing shall be supported on piling, which shall be spaced, driven, and removed, as referenced in Subsection 907-804.03.15, in a manner approved by the Engineer.

All structures built across a public street or highway on which maintenance of traffic is required, shall have falsework so arranged that a vertical clearance of at least 12' 6" is provided. Unless otherwise specified, a horizontal clearance of at least the width of the traveled way shall be provided at all times. If the vertical clearance is less than 13' 6" or the horizontal clearance is less than the full crown width of the roadway, the Contractor shall install and maintain appropriate safety devices, clearance signs and warning lights, and shall notify the Engineer sufficiently in advance of restricting the clearance for the Engineer to advise both the Traffic Engineering and the Maintenance Divisions. All traffic control and safety devices shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

907-804.03.14--Forms.

907-804.03.14.1--General. Forms shall be wood, metal, or other material approved by the Engineer. All forms shall be built mortar-tight and sufficiently rigid to prevent distortion due to pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the opening of joints due to shrinkage. The forms shall be substantial and unyielding and shall be so designed that the finished concrete

will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

Minimum requirements for slab overhang forms shall be 3/4-inch plywood supported on 2-inch x 6-inch S4S wood timbers placed flatwise on 16-inch centers.

Adjustable brackets for support of slab overhang forms shall be spaced at a maximum distance of 3' 0" center to center unless specifically approved otherwise. Grade points for forms shall coincide with the location of the adjustable form brackets.

Forms for surfaces exposed to view shall be of uniform thickness with a smooth inside surface of an approved type. Joints in forms for exposed surfaces shall be closely fitted to eliminate fins, stone pockets, or other variations in the surface of the concrete which would mar a smooth and uniform texture.

Forms shall be filleted at all sharp corners and shall be given a bevel or draft in the case of all projections, such as girders and copings, to ensure easy removal.

Metal ties or anchorages within the forms shall be so constructed as to permit their removal, without injury to the concrete, to a depth of at least the reinforcing steel clearance shown on the plans. In case ordinary wire ties are permitted, all wires, upon removal of the forms, shall be cut back at least 1/4 inch from the face of the concrete with chisels or nippers. Nippers shall be used for green concrete. All fittings for metal ties shall be designed so that upon their removal the cavities which are left will be the smallest practicable size. The cavities shall be filled with cement mortar and the surface left sound, smooth, even, and uniform in color.

Forms shall be set and maintained to the lines designated until the concrete is sufficiently cured for form removal. Forms shall remain in place for periods which shall be determined as hereinafter specified. If forms are deemed to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer will order the work stopped until the defects have been corrected.

The shape, strength, rigidity, water-tightness, and surface smoothness of reused forms shall be maintained at all times. Warped or bulged lumber shall be resized before being reused. Forms which are unsatisfactory in any respect shall not be reused.

Access to the lower portions of forms for narrow walls and columns shall be provided for cleaning out extraneous material immediately before placing the concrete.

All forms shall be treated with an approved oil or saturated with water immediately before placing the concrete. For rail members or other members with exposed faces, the forms shall be treated only with an approved oil to prevent the adherence of concrete. Any material which will adhere to or discolor the concrete shall not be used.

When metal forms are used they shall be kept free from rust, grease, or other foreign matter which will discolor the concrete. They shall be of sufficient thickness and so connected that they will remain true to shape and line, and shall conform in all respects as herein prescribed for mortar

tightness, filleted corners, beveled projections, etc. They shall be constructed so as to ensure easy removal without injury to concrete. All inside bolt and rivet heads shall be countersunk.

All chamfer strips shall be dressed, straight, and of uniform width and shall be maintained as such at all times.

907-804.03.14.2--Stay-In-Place Metal Forms. Stay-in-place (SIP) metal forms are corrugated metal sheets permanently installed between the supporting superstructure members. After the concrete has cured, these forms shall remain in place as permanent, non-structural members of the bridge.

Pay quantities for deck concrete will be computed from the dimensions shown in the Contract Plans with no allowance for changes in deflection and /or changes in dimensions necessary to accommodate the SIP metal forms.

There will be no direct payment for the cost of the forms and form supports, or any material, tools, equipment, or labor incidental thereto, but the cost shall be considered absorbed in the contract unit price for concrete.

Before fabricating any material, three (3) complete sets of SIP metal form shop drawings and design calculations, bearing the Design Engineer's Seal, shall be submitted to the Director of Structures, State Bridge Engineer, through the Engineer, for review. The Contractor's SIP metal form Design Engineer shall be a MS Registered Professional Engineer who is knowledgeable in the field of structural design.

In no case shall additional dead load produced by the use of SIP metal forms overstress any bridge component. Design calculations shall indicate any additional dead load from SIP metal form self-weight, form support hangers, concrete in flutes, concrete due to form deflection, etc. not included in the Contract Plans. The additional dead loads shall be clearly labeled and tabulated on the shop drawings. Bridge Division will evaluate the additional load for overstress of the bridge components. In the event that the additional dead load produces an overstress in any bridge component, Bridge Division will reject the Contractor's design. Deflection and loads produced by deflection of the SIP metal forms shall be considered and indicated in the design calculations.

The cambers and deflections provided in the Contract Plans do not consider the effects of SIP metal forms. The Contractor's Engineer shall take into account the weight of the forms and any additional dead load when developing the "Bridge Superstructure Construction Plan".

For the purpose of reducing any additional dead load produced by the SIP metal forms, the flutes of SIP metal forms may be filled with polystyrene foam. When polystyrene foam is used to fill the forms, the form flutes shall be filled completely; no portion of the polystyrene foam shall extend beyond the limits of the flutes. The Contractor shall ensure that the polystyrene foam remains in its required position within flutes during the entire concrete placement process. The Contractor shall not use reinforcing steel supports or other accessories in such a manner as to cause damage to the polystyrene foam. All damaged polystyrene foam shall be replaced to the

satisfaction of the Engineer. All welding of formwork shall be completed prior to placement of polystyrene foam.

For bridges not located in horizontal curves, the Contractor may reduce the additional dead load by matching the flute spacing with the transverse steel spacing of the bottom layer. The bottom longitudinal layer of steel shall have one (1) inch of minimum concrete cover measured from the bottom of the reinforcing to the top of the flute. The Contractor will not be allowed to vary the reinforcing steel spacing or size from the Contract Plans for the purpose of matching flute spacing.

907-804.03.14.2.1--Materials. SIP metal forms and supports shall meet the requirements of ASTM Designation: A653 having a coating designation G165. Form materials that are less than 0.03-inch uncoated thickness shall not be allowed.

907-804.03.14.2.2--Certification. The Contractor shall provide written certification from the manufacturer stating the product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.3--Polystyrene Foam. The polystyrene foam shall be comprised of expanded polystyrene manufactured from virgin resin of sufficient density to support the weight of concrete without deformation. The polystyrene foam shall be extruded to match the geometry of the flutes and provide a snug fit. The polystyrene foam shall have a density of not less than 0.8 pounds per cubic foot. The polystyrene foam shall have water absorption of less than 2.6% when tested according to ASTM Designation: C272. The Contractor shall provide written certification from the manufacturer stating the polystyrene foam product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.4--Design. The design of the SIP metal forms shall meet the following criteria.

1. The maximum self-weight of the stay in place metal forms, plus the weight of the concrete or expanded polystyrene required to fill the form flutes (where used), shall not exceed 20 psf.
2. The forms shall be designed on the basis of dead load of form, reinforcement, and plastic concrete plus 50 pounds per square foot for construction loads. The design shall use a unit working stress in the steel sheet of not more than 0.725 of the specified minimum yield strength of the material furnished, but not to exceed 36,000 psi.
3. Deflection under the weight of the forms, reinforcement, and plastic concrete shall not exceed 1/180 of the form span or 1/2 inch, whichever is less, for form spans of 10 feet or less, or 1/240 of the form span or 3/4 inch, whichever is less, for form spans greater than 10 feet.
4. The design span of the form shall equal the clear span of the form plus two (2) inches. The span shall be measure parallel to the form flutes.

5. Physical design properties shall be computed in accordance with requirements of the AISI Specifications for the Design of Cold Formed Steel Structural Members, latest published edition.
6. The design concrete cover required by the plans shall be maintained for all reinforcement.
7. The plan dimensions of both layers of primary deck reinforcement from the top surface of the concrete deck shall be maintained.
8. The SIP metal form shall not be considered as lateral bracing for compression flanges of supporting structural members.
9. SIP metal forms shall not be used under closure pours or in bays where longitudinal slab construction joints are located. SIP metal forms shall not be used under cantilevered slabs such as the overhang outside of fascia members.
10. Forms shall be secured to the supporting members by means other than welding directly to the member. Welding to the top flanges of steel stringers and/or girders shall not be allowed. Alternate installation procedures shall be submitted addressing this condition.

907-804.03.14.2.5--Construction. SIP metal form sheets shall not rest directly on the top of the stringer or floor beam flanges. Sheets shall be fastened securely to form supports, and maintain a minimum bearing length of one (1) inch at each end for metal forms. Form supports shall be placed in direct contact with the flange of the stringer or floor beam. All attachments for coated metal forms shall be made by bolts, clips, screws, or other approved means.

907-804.03.14.2.6--Form Galvanizing Repairs. Where forms or their installation are unsatisfactory in the opinion of the Engineer, either before or during placement of the concrete, the Contractor shall correct the defects before proceeding with the construction work. The cost of such corrective work shall be at the sole expense of the Contractor. Minor heat discoloration in areas of welds shall not be touched up.

907-804.03.14.2.7--Concrete. The Contractor shall ensure concrete placement does not damage the SIP metal forms. Approved pouring sequences shall be used. The completed SIP metal form system shall be sufficiently tight to prevent leakage of mortar or concrete. The concrete shall be consolidated to avoid honeycomb and voids, especially at construction joints, expansion joints, valleys, and ends of form sheets. Calcium chloride or any other admixture containing chloride salts shall not be used in the concrete.

907-804.03.14.2.8--Inspection. The Engineer will observe the Contractor's method of construction during all phases of the construction of the bridge deck slab, including the installation of the SIP metal form system; location and fastening of the reinforcement; composition of concrete items; mixing procedures, concrete placement, and vibration; and finishing of the bridge deck. Should the Engineer determine that the procedures used during the placement of the concrete warrant inspection of the underside of the deck, at least one section of the metal forms shall be removed in each span for this purpose. This shall be done as soon after placing the concrete as

practical in order to provide visual evidence that the concrete mix and the procedures are obtaining the desired results. An additional section shall be removed in any span if the Engineer determines that there has been any change in the concrete mix or in the procedures warranting additional inspection.

If, in the Engineer's judgment, inspection is needed to check for defects in the bottom of the deck or to verify soundness, the SIP metal forms shall be sounded with a hammer after the deck concrete has been in place a minimum of two days. If sounding discloses areas of doubtful soundness to the Engineer, the SIP metal forms shall be removed from such areas for visual inspection after the concrete has attained adequate strength. The SIP metal bridge deck forms shall be removed at no expense to the State.

At locations where sections of the metal forms have been removed, the Engineer will not require the Contractor to replace the metal forms. The adjacent metal forms and supports shall be repaired to present a neat appearance and to ensure their satisfactory retention. As soon as the form is removed, the Engineer will examine the concrete surfaces for cavities, honeycombing, and other defects. If irregularities are found and the Engineer determines that these irregularities do not justify rejection of the work, the concrete shall be repaired as directed by the Engineer. If the Engineer determines that the concrete where the form is removed is unsatisfactory, additional metal forms as necessary shall be removed to inspect and repair the slab, and the Contractor's method of construction shall be modified as required to obtain satisfactory concrete in the slab. All unsatisfactory concrete shall be removed and replaced as directed at no expense to the State.

If the method of construction and the results of the inspections as outlined above indicate that sound concrete has been obtained throughout the slabs, the amount of sounding and form removal may be reduced when approved by the Engineer.

The Contractor shall provide a safe and convenient means of conducting of the inspection.

907-804.03.15--Removal of Falsework, Forms, and Housing. In the determination of the time for the removal of falsework, forms, and housing and the discontinuance of heating, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete, and the materials used in the mix. No forms or supports shall be removed prior to approval by the Engineer. During cold weather, removal of housing and the discontinuance of heating shall be in accordance with Subsection 907-804.03.16.1.

Concrete in the last pour of a continuous superstructure shall have attained a compressive strength of 2,400 psi, as determined by cylinder tests or maturity meter probe, prior to striking any falsework. It is important that falsework be removed as evenly as possible to prevent excessive deflection stresses in the spans.

At the Contractor's option and with the approval of the Engineer, the time for removal of forms may be determined by cylinder tests, in accordance with the requirements listed in Table 6, in which case the Contractor shall furnish facilities for testing the cylinders. The facilities shall include an approved concrete testing machine of sufficient capacity and calibrated by an acceptable commercial laboratory. Tests shall be conducted in the presence of a Department representative

to witness and record strengths obtained on each break or performed by a Department certified technician in an approved testing laboratory.

[a1]The cylinders shall be cured under conditions which are not more favorable than those existing for the portions of the structure which they represent.

Table 6
Minimum Compressive Strength Requirements for Form Removal

Forms:

Columns	1000 psi
Side of Beams	1000 psi
Walls not under pressure	1000 psi
Floor Slabs, overhead	2000 psi
Floor Slabs, between beams	2000 psi
Slab Spans	2400 psi
Other Parts	1000 psi

Centering:

Under Beams	2400 psi
Under Bent Caps	2000 psi

Limitation for Placing Beams on:

Pile Bents, pile under beam	2000 psi
Frame Bents, two or more columns	2200 psi
Frame Bents, single column	2400 psi

For bridges, non-SIP metal forms for bridge deck slabs overhead and bridge deck slabs between beams shall be removed with the approval of the Engineer, between two weeks and four weeks after the removal of the wet burlap applied in accordance with Subsection 907-804.03.17.1, or application of liquid membrane applied in accordance with Subsection 907-804.03.17.2.

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. Falsework, forms, and housings may be removed when maturity meter readings indicate that the required concrete strength is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

Table 7
Requirements for use of Maturity Meter Probes

Structure Component	Quantity of Concrete	No. of Probes
Slabs, beams, walls, & miscellaneous items	0 - 30 yd ³	2
	> 30 to 60 yd ³	3
	> 60 to 90 yd ³	4
	> 90 yd ³	5
Footings, Columns & Caps	0 - 13 yd ³	2
	> 13 yd ³	3
Pavement, Pavement Overlays	1200 yd ²	2
Pavement Repairs	Per repair or 900 yd ² Whichever is smaller	2

Methods of form removal likely to cause overstressing of the concrete shall not be used. Forms and supports shall be removed in a manner that will permit the concrete to uniformly and gradually take the stresses due to its own weight. Centers shall be gradually and uniformly lowered in a manner that will avoid injurious stresses in any part of the structure.

As soon as concrete for railings, ornamental work, parapets and vertical faces which require a rubbed finish has attained a safe strength, the forms shall be carefully removed without marring the surfaces and corners, the required finishing performed, and the required curing continued.

Prior to final inspection of the work, the Contractor shall remove all falsework, forms, excavated material or other material placed in the stream channel during construction. Falsework piles may be cut or broken off at least one foot below the mudline or ground line unless the plans specifically indicate that they are to be pulled and completely removed from the channel.

907-804.03.16--Cold or Hot Weather Concreting.

907-804.03.16.1--Cold Weather Concreting. In cold weather, the temperature of the concrete when delivered to the job site shall conform to the temperature limitations of "Temperature Limitations on Concrete when Delivered to Job Site" listed in Table 8 below. Cold weather is defined as three consecutive days when there is a probability that the daily average of the highest and lowest ambient temperatures is expected to be less than 40°F. This three-day forecast shall be based on the latest information available from the National Weather Service.

When the Contractor proposes to place concrete during seasons when there is a probability of ambient temperatures lower than 40°F, the Contractor shall have available on the project the approved facilities necessary to enclose uncured concrete and to keep the temperature of the air inside the enclosure within the ranges and for the minimum periods specified herein.

When there are indications of temperatures of less than 40°F during the first four days after placement of the concrete, the concrete shall be protected from cold temperatures by maintaining a temperature between 50°F and 100°F for at least four days after placement and between 40°F and 100°F for at least three additional days. The Contractor shall use such heating equipment such as stoves, salamanders, or steam equipment as deemed necessary to protect the concrete. When dry heat is used, means of maintaining atmospheric moisture shall be provided.

At the option of the Contractor with the approval of the Engineer, when concrete is placed during cold weather and there is a probability of ambient temperatures lower than 40°F, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. An approved insulating blanketing material shall be used to protect the work when ambient temperatures are less than 40°F and shall remain in place until the required concrete strength in Table 6 is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

One or more of the aggregates and/or mixing water may be heated. The aggregates may be heated by steam, dry heat, or by placing in the mixing water which has been heated. Frozen aggregates shall not be used. When either aggregates or water are heated above 100°F, the aggregates and water shall be combined first in the mixer before the cement is added to avoid flash set. Cement shall not be mixed with water or with a mixture of water and aggregate having a temperature greater than 100°F.

The use of salt or other chemical admixtures in lieu of heating will not be permitted.

Before placing concrete, all ice or frost shall be removed from the forms and reinforcement.

In the case of concrete placed directly on or in the ground, such as for footings or bottom slabs, protection and curing during cold weather may be provided as set for concrete pavement under Subsection 501.03.20.3.

The Contractor shall assume all risk and added cost connected with the placing and protecting of concrete during cold weather. Permission given by the Engineer to place concrete during such time will in no way relieve the Contractor of responsibility for satisfactory results. Should it be determined at any time that the concrete placed under such conditions is unsatisfactory, it shall be removed and replaced with satisfactory concrete by the Contractor without extra compensation.

TABLE 8
COLD WEATHER TEMPERATURE LIMITATIONS ON CONCRETE WHEN
DELIVERED TO JOB SITE

Section thickness in the least dimension inches	Jobsite Acceptance Temperature Range °F
Less than 12	55 to 75
12 to 36	50 to 70
36 to 72	45 to 65
Greater than 72	40 to 60

907-804.03.16.2--Hot Weather Concreting. The manufacture, placement, and protection of concrete during hot weather requires special attention to ensure that uniform slump ranges and satisfactory placement qualities are maintained, that surface cracking is held to a minimum, and that design strengths are produced.

When the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods.

When the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

907-804.03.17--Curing Concrete. Curing is defined as all actions taken to ensure the moisture and temperature conditions of freshly placed concrete exist so the concrete may develop its potential properties. Curing shall take place from the time of placement until its potential properties have developed. The Contractor shall use the guidance in ACI 308R-01 to:

- a) cure the concrete in such a manner as to prevent premature moisture loss from the concrete,
- b) supply additional moisture to the concrete as required in order to ensure sufficient moisture within the concrete, and
- c) maintain a concrete temperature beneficial to the concrete.

Curing in accordance with the requirements in either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall be completely established within 20 minutes after finishing, except as noted for bridge decks. Finishing is complete when the pan drag, burlap drag, or other finishing method is complete.

When stay-in-place (SIP) metal forms are used in accordance with Subsection 907-804.03.14.2 in conjunction with the Transverse Method in accordance with Subsection 804.03.19.7.3, if the concrete mixture contains lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 and an internal curing water content of 8.0 pounds or greater per 100 pounds of total cementitious materials, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2. The minimum amount of LWA shall be established following the information in the Department's *Concrete Field Manual*, Paragraph 5.5.5. If the concrete mixture does not meet or exceed this internal curing water content, curing shall be accomplished in accordance with Subsection 907-804.03.17.1.

When SIP metal forms are not used or used in conjunction with the Longitudinal Method in accordance with Subsection 804.03.19.7.2, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2.

The length of time for curing shall be maintained in accordance with either of the following:

- 1. Prescribed Length of Time:**

- a) Curing following the requirements of Subsection 907-804.03.17.1 shall continue uninterrupted for at least 14 days.
- b) Curing following the requirements of Subsection 907-804.03.17.2 shall continue uninterrupted for at least 10 days.

OR

2. Length of Time Defined by Development of Compressive Strength:

Curing following the application requirements of Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall continue uninterrupted for each day's production until the compressive strength of the concrete exceeds 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Therefore, if an area is being cured in accordance with Subsection 907-804.03.17.1, the curing by wet burlap shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Likewise, if an area is being cured in accordance with Subsection 907-804.03.17.2, the curing by liquid membrane shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1.

The compressive strength of the concrete may be determined by the use of maturity meter in accordance with Subsection 907-804.03.15.

907-804.03.17.1--Water With Waterproof Cover. All burlap shall be completely saturated and wet prior to placing it on the concrete. The burlap shall have been fully soaked in water for a minimum of 12 hours prior to placement on the concrete.

For bridge decks, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of the initial strike-off for bridges without a skew and 25 minutes of the initial strike-off for bridges with a skew. For all other concrete, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of completing finishing.

For bridge decks, following the first layer of burlap, the Contractor shall apply a second layer of saturated burlap within five (5) minutes of applying the first layer.

The applied burlap shall completely cover all exposed concrete surfaces. In areas where the burlap may not be directly applied due to the concrete surface, for example, in areas where reinforcing steel protrudes thru the concrete surface, like in the areas of a bridge deck where the bridge railing will be constructed at a later time, the saturated burlap shall be draped over the steel. The concrete surface shall not be allowed to dry after strike-off or at any time during the curing period.

The Contractor shall maintain the burlap in a fully wet condition using powered fogging equipment capable of producing a fog spray of atomized droplets of water until the concrete has gained sufficient strength to allow foot traffic without the foot traffic marring the surface of the concrete. Burlap shall not be maintained in the fully wet condition using equipment which does not produce a fog spray of atomized droplets of water or by use of manually pressurized sprayers.

For bridge decks, once the concrete has gained sufficient strength to allow foot traffic which does not mar the surface of the concrete, soaker hoses shall be placed on the burlap. The soaker hoses shall then be supplied with running water continuously to maintain continuous saturation of all burlap and the entire concrete surface.

If there is a delay in the placement of the first layer of saturated burlap outside the time limit, the struck-off and finished concrete shall be kept wet by use of the powered fogging equipment used to keep the burlap wet.

White polyethylene sheets shall be placed on top of the wet burlap and, as applicable, soaker hoses, covering the entire concrete surface as soon as practical and not more than 12 hours after the placement of the concrete. White polyethylene sheets of the widest practical width shall be used, overlapping adjacent sheets a minimum of six inches (6") and tightly sealed with an adhesive like pressure sensitive tape, mastic, glue, or other approved methods to form a complete waterproof cover of the entire concrete surface. White polyethylene sheets which overlap a minimum of two feet (2') may be held in place using means other than an adhesive. The white polyethylene sheets shall be secured so that wind will not displace them. The Contractor shall immediately repair the broken or damaged portions or replace sections that have lost their waterproof qualities.

If burlap and/or white polyethylene sheets are temporarily removed for any reason during the curing period, the Contractor shall keep the entire exposed area continuously wet. The saturated burlap and white polyethylene sheets shall be replaced, resuming the specified curing conditions, as soon as possible.

The Contractor shall inspect the bridge deck surface once every eight (8) hours for the entirety of the curing period, so that all areas remain wet for the entire curing period and all curing requirements are satisfied and document the inspection in accordance with Subsection 907-804.03.17.1.1.

At the end of the curing period, one coating of liquid membrane shall be applied following the requirements of Subsection 907-804.03.17.1.2. The purpose of the coating of liquid membrane is to allow for slow drying of the concrete. The application of liquid membrane to any area shall be complete within 30 minutes of the beginning of removal of the white polyethylene sheets, soaker hoses, and burlap from this area.

907-804.03.17.1.1--Documentation for Bridge Decks. The Contractor shall provide the Engineer with a daily inspection report that includes:

- documentation that identifies any deficiencies found (including location of deficiency);
- documentation of corrective measures taken;
- a statement of certification that all areas are wet and all curing material is in place on the entire bridge deck;
- documentation showing the time and date of all inspections and the inspector's signature;
- documentation of any temporary removal of curing materials including location, date and time, length of time curing was removed, and means taken to ensure exposed area was kept continuously wet.

907-804.03.17.1.2--Liquid Membrane. At the end of the 14-day wet curing period the wet burlap and polyethylene sheets shall be removed and within 30 minutes, the Contractor shall apply white liquid membrane to the deck. The liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The application of liquid membrane shall be accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first application of liquid membrane.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The coating shall be protected against marring for at least seven (7) days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

The 7-day period during which the liquid membrane is applied and protected shall not be reduced even if the period of wet curing is extended past the required 14 days.

907-804.03.17.1.2.1--Liquid Membrane Documentation. The Contractor shall make available to the Engineer an application rate verification method and any information necessary during application of the liquid membrane to verify that the rate of application meets the prescribed rate for the various surfaces of the concrete, including, but not limited to, the top surface of the bridge deck and exposed sides of the bridge deck after any forms are removed. The Contractor shall submit this application verification method to the Engineer in accordance with Subsection 907-804.02.12.1.1.

One method of verifying the rate of application is as follows:

1. Determine the volume of liquid membrane in the container. For a container with a uniform cross-sectional area, for example a 55-gallon drum, determine the area of the cross-section. Determine the height of the surface of the liquid membrane from the bottom of the container. This may be accomplished by inserting a sufficiently long, clean dip-stick parallel with the axis of the container into the liquid membrane until the inserted end of the dip-stick contacts the bottom of the container. On removing the dip-stick, measure the length from the end which was inserted to the point on the dip-stick where the liquid membrane ceases to coat the dip-stick. Multiply the area of the cross-section by the height of the level of liquid membrane, maintaining consistent units, to determine the volume.
2. Perform step 1 prior to beginning applying the liquid membrane to establish the initial volume.
3. During the period of application, perform step 1 each 100 square feet of bridge deck.
4. In order to meet the required application rate of one (1) gallon per 200 square feet, the amount in the container shall be at least 0.5 gallon less than the previous volume in the previous 100 square feet. Other changes in volume may apply depending on the manufacturer's recommended application rate.
5. Additional applications to an area shall be applied until the required rate is satisfied. Areas which are not visually satisfactory to the Engineer shall have additional liquid membrane applied as directed by the Engineer.

The amount of liquid membrane applied shall be determined each day using the application verification method. This information shall be submitted to the Engineer within 24 hours of applying the liquid membrane.

907-804.03.17.2--Liquid Membrane Method. All surfaces on which curing is to be by liquid membrane shall be given the required surface finish prior to the application of liquid membrane. Concrete surfaces cured by liquid membrane shall receive two applications of white liquid membrane. Neither application shall be made from a position supported by or in contact with the freshly placed concrete. Both applications shall be applied perpendicularly to the surface of the concrete.

When using liquid membrane, the liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The application of liquid membrane shall accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first two applications of liquid membrane.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The first application of the liquid membrane shall be made as the work progresses. For bridge decks, the first application shall be completed in each area of the deck, including the area in which the bridge railing will be later constructed, within 20 minutes of initial strike-off for bridges with no skew and within 25 minutes of initial strike-off for bridges with skew. For all other concrete, the first application of the liquid membrane shall be completed within 20 minutes of finishing.

The second application shall be applied within 30 minutes after the first application. The liquid membrane shall be uniformly applied to all exposed concrete surfaces.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The Contractor shall make available to the Engineer an application rate verification in accordance with Subsection 907-804.03.17.1.2.1.

The coating shall be protected against marring for at least 10 days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

After the specified time for curing, but prior to constructing the bridge railing, all liquid membrane shall be removed from both the exposed surfaces of the reinforcing steel and the concrete surfaces on which bridge rail will be constructed. This removal of liquid membrane may be accomplished by high pressure washing or other methods approved by the Engineer.

907-804.03.18--Expansion and Fixed Joints, Bearings, Anchor Bolts, Plates, Castings, Pipes, Drains, Conduits, Etc. All joints shall be constructed according to details shown on the plans. The edges of the concrete at open or filled joints shall be chamfered or edged as indicated on the plans.

907-804.03.18.1--Open Joints. Open joints shall be placed in the locations shown on the plans and shall be constructed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material. The insertion and removal of the template shall be accomplished without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint unless so specified on the plans.

907-804.03.18.2--Filled Joints. Poured expansion joints and joints to be sealed with premolded materials shall be constructed similar to open joints. When premolded types are specified, the filler shall be placed in correct position as the concrete on one side of the joint is placed. When

the form is removed, the concrete on the other side shall be placed. Adequate water stops of metal, rubber, or plastic shall be carefully placed as shown on the plans.

907-804.03.18.3--Premolded and Preformed Joint Seals. When preformed elastomeric compressive joint seals are specified, the previously formed and cured open joint shall be thoroughly cleaned of all foreign matter, the required adhesive uniformly applied, and the seal installed in accordance with the recommendations of the manufacturer of the seal.

When premolded filler is used for the joints in the roadway slab, the tops shall be adequately sealed with poured joint filler in accordance with details on the plans. Premolded filler shall be permanently fastened to an adjacent concrete surface by appropriate use of copper wire, copper nails, or galvanized nails.

907-804.03.18.4--Steel Joints. The plates, angles, or other structural shapes shall be accurately shaped at the shop to conform to the section of the concrete floor. Fabrication and painting shall conform to the specifications covering those items. When called for on the plans or in the special provisions, the material shall be galvanized in lieu of painting. Care shall be taken to ensure that the surface in the finished plane is true and free of warping. Positive methods shall be employed in placing the joints to keep them in correct position during the placing of the concrete. The opening at expansion joints shall be that designated on the plans at normal temperature, and care shall be taken to avoid impairment of the clearance in any manner.

907-804.03.18.5--Water Stops. Adequate water stops of metal, rubber, or plastic shall be placed as shown on the plans. Where movement at the joint is provided for, the water stops shall be of a type permitting movement without injury. They shall be spliced, welded, or soldered to form continuous watertight joints.

907-804.03.18.6--Bearing Devices. Bearing plates, rockers, and other bearing devices shall be constructed according to details shown on the plans. Unless otherwise specified or set in plastic concrete, they shall be set in grout to insure uniform bearing. Structural steel and painting shall conform to the requirements of Sections 810 and 814. When specified, the material shall be galvanized in lieu of painting. The rockers or other expansion bearing devices shall be set, considering the temperature at the time of erection, so that the required position of the device is provided.

At all points of bearing contact, concrete members shall be separated from underlying members by dimensioned bearing pads or by methods and/or materials specified on the plans.

When not otherwise specifically provided, contact areas between concrete super-structures and substructures shall be separated by three layers of No. 15, Type I, roofing felt.

907-804.03.18.7--Friction Joints. Metal friction joints shall consist of plates as indicated on the plans and shall be securely anchored in correct position. All sliding surfaces shall be thoroughly coated with an approved graphite grease. Movement shall not be impeded by the concrete in which the plates are embedded.

907-804.03.18.8--Placing Anchor Bolts, Plates, Castings, Grillage, Conduits, Etc. All anchor bolts, plates, castings, grillage, conduits, etc. indicated on the plans to be placed in or on the concrete shall be placed, set, or embedded as indicated or as directed. These items of the construction shall be set in portland cement mortar as referenced in Subsection 714.11.5, except that anchor bolts may, as permitted by the Engineer, be built into the masonry, set in drilled holes, or placed as the concrete is being constructed by inserting encasing pipe or oiled wooden forms of sufficient size to allow for adjustment of the bolts. After removal of the pipe or forms, the space around the bolts shall be filled with portland cement mortar completely filling the holes. The bolt shall be set accurately and perpendicular to the plane of the seat.

Anchor bolts which are to be set in the masonry prior to the erection of the superstructure shall be carefully set to proper location and elevation with a template or by other suitable means.

When bed plates are set in mortar, no superstructure or other load shall be placed thereon until this mortar has been allowed to set for a period of at least 96 hours, subject to the restrictions for cold weather concreting in Subsection 907-804.03.16.1. The mortar shall be kept well moistened during this period.

Weep hole drains shall be installed in abutments and retaining walls, and roadway drains or scuppers shall be installed in the roadway slabs in accordance with the details shown on the plans.

Where backfill is to be made at weep holes or openings in the structure, sand or stone chimneys or French drains shall be constructed as specified and shall extend through the portion of the backfill to be drained. Except as otherwise provided, the sand, stone, or slag used in this construction shall meet the requirements of Subsection 704.04.

907-804.03.19--Finishing Concrete Surfaces.

804.03.19.1--Classes of Finishes. Surface finishes of exposed concrete surfaces shall be classified as follows:

- Class 1 - Ordinary Surface Finish
- Class 2 - Rubbed or spray Finish
- Class 3 - Tooled Finish
- Class 4 - Sand-Blast Finish
- Class 5 - Wirebrush or Scrubbed Finish
- Class 6 - Floated Surface Finish

907-804.03.19.2--Class 1, Ordinary Surface Finish. Immediately following the removal of forms, all fins and irregular projections shall be removed from all surfaces except from those which are not to be exposed or not to be waterproofed. On all surfaces, the cavities produced by form ties and all other holes, honeycomb spots, broken corners or edges, and other defects shall be thoroughly cleaned, and after having been kept saturated with water for at least three hours shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportions used in the class of the concrete being finished. Mortar used in pointing shall be not more than one hour old. The mortar patches shall be cured as specified under Subsection 907-804.03.17. All

construction and expansion joints shall be left carefully tooled and free of mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges.

The resulting surfaces shall be true and uniform. All surfaces which cannot be repaired to the satisfaction of the Engineer shall be given a Class 2 rubbed finish.

907-804.03.19.3--Class 2, Rubbed or Spray Finish.

907-804.03.19.3.1--Rubbed Finish. After removal of forms, the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as its condition will permit. Immediately before starting this work, the concrete shall be kept thoroughly saturated with water for at least three hours. Surfaces shall be rubbed with a medium course Carborundum stone using a small amount of mortar on its face. The mortar shall be composed of cement and sand mixed in the proportions used in the concrete being finished. Rubbing shall be continued until all form marks, projections, and irregularities have been removed, all voids are filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this time.

After all concrete above the surface being treated has been cast, the final finish shall be obtained by rubbing with a fine Carborundum stone and water. This rubbing shall continue until the entire surface is of a smooth texture and uniform color.

After the final rubbing is completed and the surface has dried, it shall be rubbed with burlap to remove loose powder and objectionable marks.

907-804.03.19.3.2--Spray Finish. Prior to the spray finish, the concrete shall be given a Class 1 finish in accordance with Subsection 907-804.03.19.2, supplemented if necessary with a grout meeting the requirements of Subsection 714.11 with fine aggregate modified to require 100 percent passing the No. 16 Sieve.

Grout shall be applied with burlap pads or float sponges, and as soon as the grout has dried the surface shall be brushed to remove all loose grout and the surface left smooth and free of air holes. Surfaces to be sprayed shall be free of efflorescence, flaking coatings, dirt, oil, and other foreign substances. Prior to application of the spray finish, the surfaces shall be free of moisture, as determined by sight and touch, and in a condition consistent with the manufacturer's published recommendations.

The spray finish material shall meet the requirements of Subsection 714.12 and shall be listed on of Approved Sources of Materials. The spray finish shall be applied with heavy duty spray equipment capable of maintaining a constant pressure as necessary for proper application. The material shall be applied as recommended by the manufacturer except the rate of application shall not be less than one gallon per 50 square feet of surface area without prior written approval of the Engineer.

The completed finish shall be tightly bonded to the structure and present a uniform appearance and texture equal to or better than a rubbed finish. If necessary, additional coats shall be sprayed to produce the desired surface texture and uniformity. Upon failure to adhere positively to the

structure without chipping or cracking or to attain the desired surface appearance, the coatings shall be completely removed and the surface given a rubbed finish in accordance with 907-804.03.19.3.1, or other approved methods shall be used to obtain the desired surface finish to the satisfaction of the Engineer without additional cost to the State.

907-804.03.19.4--Classes 3, 4, and 5 Finishes. If required, specifications for these finishes will be contained in the special provisions.

907-804.03.19.5--Class 6, Floated Surface Finish. After the concrete has been deposited in place, it shall be consolidated and the surface shall be struck off by means of a strike board and floated with a wooden or cork float. An edging tool shall be used on edges and expansion joints. The surface shall not vary more than 1/8 inch under a 10-foot straightedge. The surface shall have a granular or matte texture which will not be slick when wet.

907-804.03.19.6--Required Finishes for Various Surfaces.

907-804.03.19.6.1--General. Unless otherwise specified, the top surface of sidewalks, the top horizontal surfaces of footings, and top slabs of box bridges, box culverts, or other structures shall be given a Class 6 finish. All formed concrete surfaces shall be given a Class 1 finish, except on surfaces which are completely enclosed, such as the inside surfaces of cells of box girders, the removal of fins and form marks and the rubbing of mortared surfaces to a uniform color will not be required.

In reference to finishing, exposed surfaces are surfaces or faces which may be seen after all backfill has been placed. Exposed surfaces requiring a Class 2 finish shall be finished at least one foot below the ground line or the low water elevation, whichever is higher.

The Class 2 finish shall be made upon a Class 1 finish. After the removal of forms the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as the condition of the concrete will permit.

Bridge floors shall be finished in accordance with Subsection 907-804.03.19.7.

907-804.03.19.6.2--Finishing Formed Concrete Surfaces of Box Bridges, Box Culverts, Pipe Headwalls, and Minor Structures. The exposed surfaces of wing walls and parapets of box bridges and box culverts to be used as vehicular or pedestrian underpasses shall be given a Class 2 finish. Exposed surfaces of other box culverts or box bridges, pipe culvert headwalls, and other minor structures shall be given a Class 1 finish unless otherwise indicated on the plans.

The exposed surfaces of retaining walls including copings and parapets shall receive a Class 2 finish.

907-804.03.19.6.3--Finishing Formed Concrete Surface of Bridges. All formed concrete bridge surfaces which are exposed shall have a Class 1 or 2 finish as set forth herein unless designated otherwise on the plans.

Bridges with designated surfaces for Class 2 finish are classified as follows:

- Group A - Bridges over highways, roads and streets.
- Group B - Bridges over waterways and railroads.
- Group BB - Twin or adjacent bridges of Group B category.

When a Group B or BB bridge also spans a highway, road or street, exposed concrete surfaces shall be finished in accordance with Group A requirements.

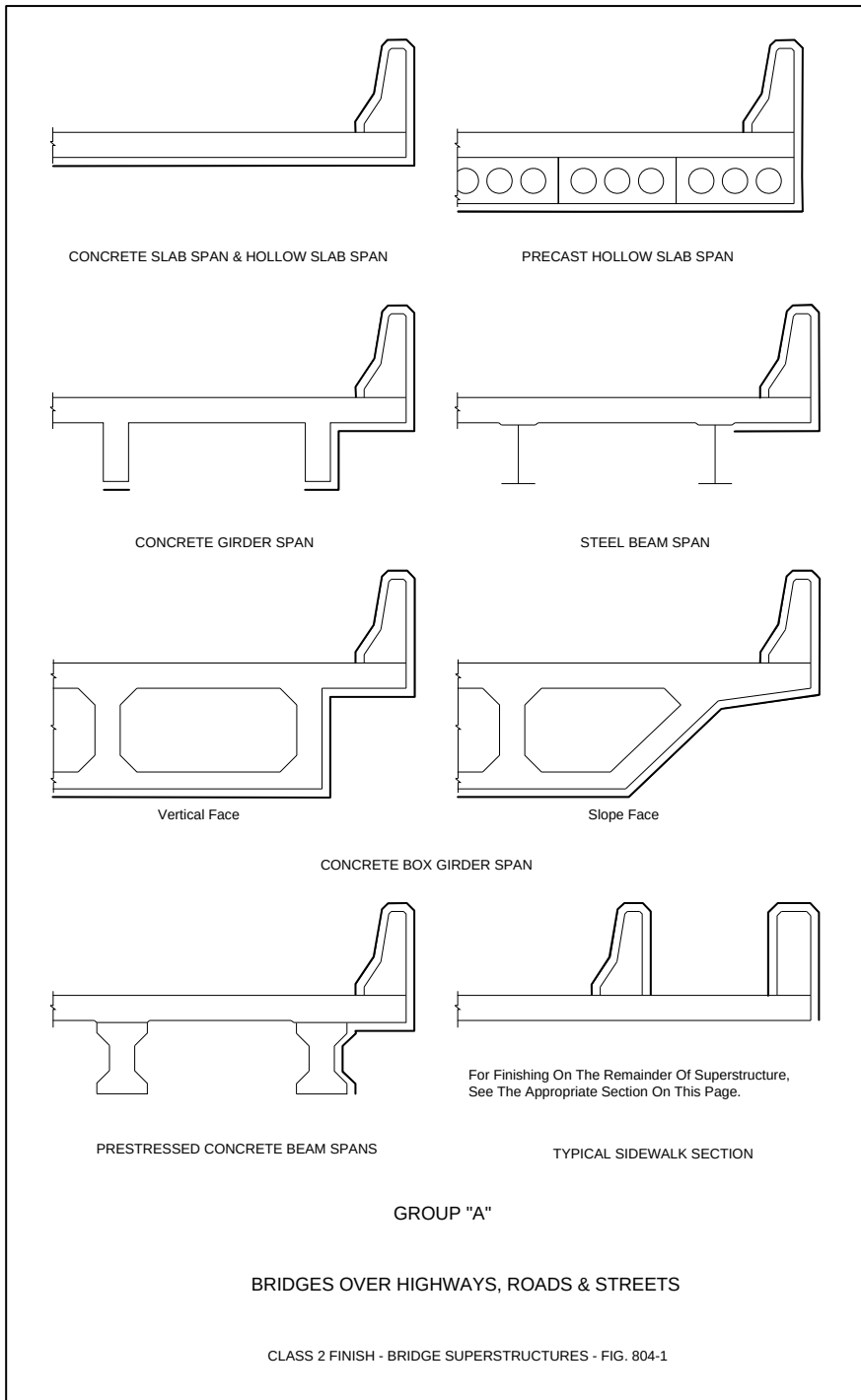
(A) Superstructures. Concrete surfaces to be given a Class 2 finish shall be the exposed surfaces of wings and rails and other exposed surfaces indicated by a double line in Figures 804-1, 804-2, and 804-3.

When a Group B or BB also spans a highway, road or street, the superstructure of spans over and extending one span in each direction beyond the lower level highway, road or street shall be given a Class 2 finish as shown for Group A.

(B) Substructures. Concrete surfaces to be given a Class 2 finish are as follows:

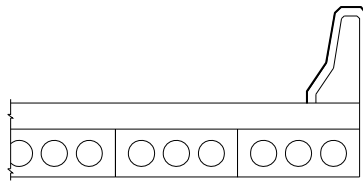
Group A. Exposed surfaces of abutments, end bents, end bent posts, wing walls, railing, retaining walls, parapets, copings, piers, columns, piles, caps, struts or walls between columns or piles, encasement of steel piles, arch rings and spandrel walls.

Group B and BB. Exposed surfaces of abutments, wing walls, end bent posts, railing, retaining walls, parapets and copings.

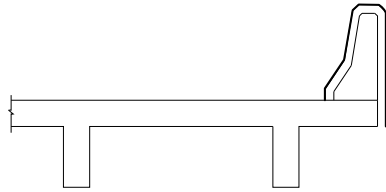




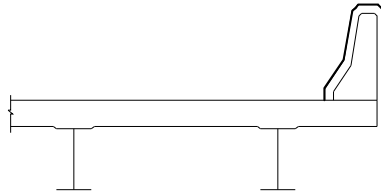
CONCRETE SLAB SPAN & HOLLOW SLAB SPAN



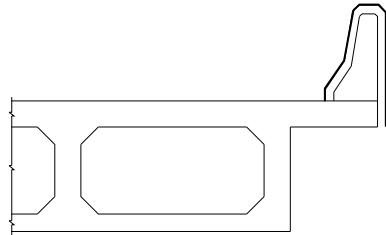
PRECAST HOLLOW SLAB SPAN



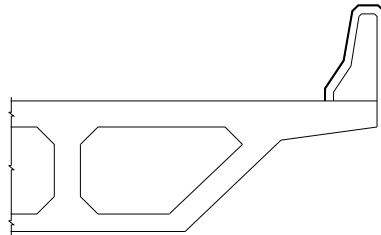
CONCRETE GIRDER SPAN



STEEL BEAM SPAN

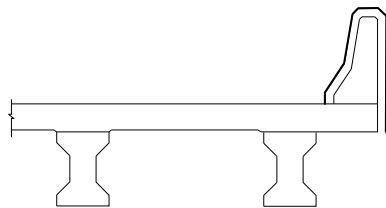


Vertical Face

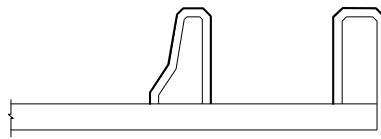


Slope Face

CONCRETE BOX GIRDER SPAN



PRESTRESSED CONCRETE BEAM SPANS

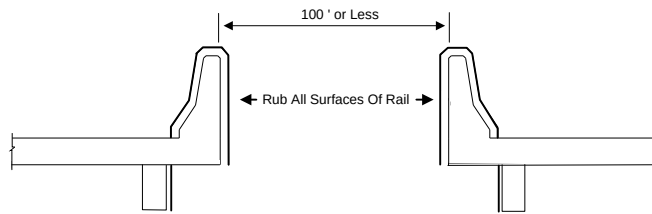


For Finishing On The Remainder Of Superstructure,
See The Appropriate Section On This Page.

TYPICAL SIDEWALK SECTION

GROUP "B"

BRIDGES OVER WATERWAYS AND BRIDGES OVER RAILROAD TRACKS



GROUP "B B" - ADJACENT BRIDGES

GROUP "B B"

TWIN or DUAL BRIDGES

CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-3

907-804.03.19.7--Finishing Bridge Decks.

907-804.03.19.7.1--General. Concrete bridge decks shall be struck off and finished by the method(s) designated on the plans.

In the event a method is not designated, the Contractor may use either the longitudinal or transverse method subject to the requirements contained in these specifications.

Except when indicated otherwise on the plans, the finish of the bridge deck shall be either a belt finish, a broom finish, or one of the following drag methods: pan, double pan, burlap, or pan and burlap. Manual finishing of the bridge deck shall be performed only in areas inaccessible by the finishing equipment mounted to the strike-off screed, but shall not hinder the requirements for curing in accordance with Subsection 907-804.03.17.1. The surface texture specified and surface requirements shall be in accordance with the applicable requirements of Subsections 501.03.17 and 501.03.18 modified only as the Engineer deems necessary for bridge deck construction operations.

At no time shall water on the surface of the concrete from bleeding, fogging, curing, or other sources be worked into the concrete or used as an aid for finishing.

Regardless of the method of finishing selected, requirements for curing per Subsection 907-804.03.17 shall be completed within the specified time limits. If the requirements in Subsection 907-804.03.17 are not completed within the specific time limits, the Contractor shall cease operations, revise his operations up to and including acquiring new or additional equipment or additional personnel in order to satisfy the requirements in Subsection 907-804.03.17, and, on approval from the Engineer, resume operations

907-804.03.19.7.2--Longitudinal Method. The longitudinal method may be used for repairs to bridge decks or bridge widening projects. For bridge widening projects, curing in accordance with Subsections 907-804.03.17 shall be completed within 30 minutes of initial strike-off for bridges without skew and within 35 minutes of initial strike-off for bridges with skew.

The longitudinal method requires that the strike-off screed be supported on accurately graded and supported bulkheads or templates placed across the full width at the end(s) of the pour. Before the concrete is placed, approved fixed templates or wooden bulkheads of not less than 1¼-inch lumber shall be placed perpendicular to the centerline of the roadway, or in the case of skew bridges at the angle of skew. At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed to assure the specified clearance to the reinforcing steel. The upper surface of the template or bulkheads shall be accurately set to conform to the required grade and crown.

Special attention shall be given to the gutter lines where the strike-off screed cannot reach. The gutters shall be finished by hand and tested with the straight edge. Floor drains shall be set lower than the finished gutter line and finished over. After initial set, the concrete shall be dished out and finished around the drains to form an outlet.

After the concrete has been deposited and rough graded, it shall be struck off by means of a strike-off screed resting on the bulkheads or fixed templates. The strike-off screed shall be of a type satisfactory to the Engineer and shall have sufficient strength to retain its shape under all working conditions. The final surface shall comply with the applicable requirements of Subsections 501.03.17.6 and 501.03.18, and unless otherwise specified in the contract, the final finish under this method shall be the belt finish.

In general, the overall strike-off screed should be trussed, with bracing heavy enough to support the weight of a man without deflecting, and should be adjustable for camber and correction of sag.

The strike-off screed will ride on the bulkheads or fixed templates at the ends of the section being finished. Care shall be taken to see that the bulkhead or fixed template elevations are accurately set since the entire span surface will be controlled by them. The manipulation of the screed shall be such that neither end is raised from the bulkheads or templates during the process.

The concrete shall be struck off by beginning at one curb and proceeding entirely across the span. A slight excess of concrete shall be kept in front of the cutting edge at all times. This operation shall be repeated at least three times. In each case, the strike-off screed shall be picked up and carried back to the point of beginning. No backward strokes will be allowed. The strike-off screed shall be moved along the bulkheads or fixed templates with a combined longitudinal and transverse motion. This operation may be manual or mechanical. Standing or walking in the fresh concrete ahead of the strike-off screed will not be permitted.

907-804.03.19.7.3--Transverse Method. The transverse method requires that the screeding equipment be supported on accurately graded and supported rails placed beyond the gutter lines and parallel with the centerline of the bridge.

The machine shall be so constructed and operated as to produce a bridge deck of uniform density with minimum manipulation of the fresh concrete and achieved in the shortest possible time. Manual transverse methods of screeding will not be permitted.

The finishing machine shall be supported on vertically adjustable rails set a sufficient distance from the gutter line to allow free movement of the screed from gutter line to gutter line. Satisfactory means of load distribution with minimum rail deflection shall be provided. The screed rails for a deck pour shall be completely in place for the full length of the pour and shall be firmly secured prior to placing concrete. The screed rails shall be adjusted as necessary to compensate for settlement and deflection occurring during the screeding operations. Supports for the screed rail shall be located directly over slab overhang support brackets as referenced in Subsection 907-804.03.14.1.

At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed carriage to assure the specified clearance to the reinforcing steel.

The screed shall be equipped with a metal cutting edge or other approved mechanical means for accurately fine grading the plastic concrete to the required grade and surface smoothness and shall be supported by a bridging structure sufficiently rigid and heavy to perform operations

satisfactorily on concrete of minimum slump without vibration, distortion, and wrecking of forms. The screed shall be mechanically actuated to deliver the screeding action and for travel in a longitudinal direction at a uniform rate along the bridge deck.

The screed shall complete sufficient passes to strike off all of the excess concrete with ample mortar along the entire leading edge to assure filling of low spots. Care shall be taken to remove all objectionable material from the gutters where final hand finishing will be required.

The selection of the transverse method may require the Contractor to furnish bridge deck concrete which contains an approved water-reducing set-retarding admixture in the quantities approved by the Engineer at no additional cost to the State. See Subsection 713.02 for more information.

Other finishing requirements shall be in accordance with the general requirements in Subsection 907-804.03.19.7.1 and as specified on the plans.

907-804.03.19.7.4--Acceptance Procedure for Bridge Deck Smoothness. After the bridge decks and bridge end slabs are completed and preferably before the construction of the bridge railing, they shall be tested for ride quality using a Contractor furnished profilograph. Profile Index Values shall be determined in accordance with Department SOPs and these specifications. The profilograph shall meet the requirements of Subsection 907-804.03.19.7.5. Profiles will be obtained in the wheel paths of the main thru lanes and, where conditions allow, in the wheel paths of any auxiliary lanes or tapers. Profile Index Values for bridge decks and bridge end slabs shall be obtained for all state roads with four lanes or more, on state roads three lanes or less where the current traffic count is 2000 ADT or higher, or as designated on the plans. Ride quality tests will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge end slab as possible and shall proceed forward across the remainder of the bridge end slab, across the bridge deck and continue across the next bridge end slab to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge end slab. Bridges and bridge end slabs not requiring a ride quality test must meet a 1/8 inch in 10-foot straightedge requirement in longitudinal and transverse directions. Bridges in horizontal curves having a radius of less than 1000 feet at the centerline and bridges within the superelevation transition of such curves are excluded from a test with the profilograph.

The Profile Index Value for bridge decks including the bridge end slabs shall be averaged for the left and right wheel path for each lane and where applicable, each auxiliary lane and taper, and shall not exceed 65 inches per mile for each lane. Auxiliary lanes, tapers, shoulders and other areas that are not checked with the profilograph, shall meet a 1/8 inch in 10-foot straightedge check made transversely and longitudinally across the deck or slab. In addition, individual bumps or depressions exceeding 0.3 of an inch, when measured from a chord length of 25 feet, shall be corrected and the surface shall meet a 1/8 inch in 10-foot straightedge check made transversely across the deck or slab.

Bridge decks and bridge end slabs not meeting the preceding requirements shall be corrected. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of grinding the bridge deck in accordance with this specification. All corrective work shall precede final surface texturing. After completion of final surface texturing, all surface areas

corrected by grinding shall be sealed with a nonstaining 40% minimum alkylalkoxysilane penetrating sealant applied per the manufacturer's directions.

In case the bridge end slabs are to be constructed on a future project, the bridge deck(s) alone shall be tested for ride quality using the acceptance procedure outlined above, except that the ride quality test will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge as possible and shall proceed forward across the bridge deck to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge.

Expansion joint installation shall be delayed and the joint temporarily bridged to facilitate operation of the profilograph and grinding equipment across the joint wherever feasible.

It shall be the Contractor's responsibility to schedule profilograph testing. The Contractor shall notify the Department at least five (5) days in advance of profilograph testing. The Contractor shall ensure that the area to be tested has been cleaned and cleared of all obstructions. Profilograph testing of bridge decks and bridge end slabs shall be performed by the Contractor under supervision of the Engineer. All profilograph testing shall be performed at no additional cost to the Department. The Contractor will be responsible for traffic control associated with this testing operation.

907-804.03.19.7.4.1--Grinding Bridge Decks.

907-804.03.19.7.4.1.1--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture portland cement concrete pavement with diamond blades. The effective wheel base of the machine shall not be less than 12.0 feet. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 3.0 feet forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least 3.0 feet wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at cracks, joints, or other locations.

907-804.03.19.7.4.1.2--Grinding. The grinding areas will be determined by the Contractor and approved by the Engineer. The Contractor shall develop and submit to the Engineer for approval a Grinding Plan. The Contractor shall allow up to 45 days for the Department to review the Plan prior to starting any grinding operations. This plan shall include as a minimum:

- 1) Name of the project superintendent in responsible charge of the grinding operation.
- 2) List and description of all equipment to be used.
- 3) Maximum depth of each pass allowed by the grinding equipment.
- 4) Maximum width of each pass allowed by the grinding equipment.
- 5) Details of a sequence of the grinding operation.
- 6) Complete data from Profilograph runs, based on a 0.3 inch bump height, for each wheel path over the entire bridge including bridge end slabs, which shall include profile index,

bump locations (in stations), bump heights and proposed final cross-slopes. When a computerized profilograph is used, a complete printout of the profile including the header information for each wheel path will be required.

- 7) Data showing reinforcing steel clearance in all areas to be ground.
- 8) A detailed drawing of the deck showing areas to be ground with station numbers and grinding depths clearly indicated.
- 9) A description of grinding in areas where drains are in conflict with grind areas.
- 10) Details of any changes in deck drainage, anticipated ponding, etc.

The Engineer will evaluate the grinding plan for conformance with the plans and specifications, after which the Engineer will notify the Contractor of any additional information required and/or changes that may be needed. Any part of the plan that is unacceptable will be rejected and the Contractor shall submit changes for reevaluation. All approvals given by the Engineer shall be subject to trial and satisfactory performance in the field, and shall not relieve the Contractor of the responsibility to satisfactorily complete the work.

The construction operation shall be scheduled and proceed in a manner that produces a uniform finished surface. Grinding will be accomplished in a manner that eliminates joint or crack faults while providing positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane. Auxiliary or ramp lane grinding shall transition as required from the mainline edge to provide positive drainage and acceptable riding surface.

The operation shall result in a finished surface that conforms as close as possible to the typical cross-section and the requirements specified in Subsection 907-804.03.19.7.4.1.3.

The Contractor shall establish positive means for removal of grinding residue. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities.

907-804.03.19.7.4.1.3--Final Surface Texture. The grinding process shall produce a finish surface that is as close as possible to grade and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall be approximately 1/16 inch higher than the bottoms of the grooves with approximately 53 to 57 evenly spaced grooves per foot. Grinding chip thickness shall be a minimum of 0.080 inches thick.

The finished bridge decks and bridge end slabs shall be retested for riding quality using a Contractor furnished profilograph meeting the requirements of Subsection 907-804.03.19.7.5. The finished results shall meet the following conditions:

- (a) Individual bumps or depressions shall not exceed 0.3 inches when measured from a chord length of 25 feet.
- (b) The final index value for the bridge deck and bridge end slabs shall be an average of both the right and left wheel paths of each lane and shall not exceed 65 inches per mile.

The final profilogram will be furnished to the Engineer for informational purposes.

907-804.03.19.7.5--Profilograph Requirements. The smoothness of the bridge deck will be determined by using a California Profilograph to produce a profilogram (profile trace) at each designated location. The surface shall be tested and corrected to a smoothness index as described herein with the exception of those locations or specific projects that are excluded from a smoothness test with the profilograph.

The profilograph, furnished and operated by the Contractor under supervision of the Engineer, shall consist of a frame at least 25 feet in length supported upon multiple wheels having no common axle. The wheels shall be arranged in a staggered pattern so that no two wheels will simultaneously cross the same bump. A profile is to be recorded from the vertical movement of a sensing mechanism. This profile is in reference to the mean elevation of the contact points established by the support wheels. The sensing mechanism, located at the mid-frame, may consist of a single bicycle-type wheel or a dual-wheel assembly consisting of either a bicycle-type (pneumatic tire) or solid rubber tire vertical sensing wheel and a separate bicycle-type (pneumatic tire) longitudinal sensing wheel. The wheel(s) shall be of such circumference(s) to produce a profilogram recorded on a scale of one (1) inch equal to 25 feet longitudinally and one (1) inch equal to one (1) inch (full scale) vertically. Motive power may be provided manually or by the use of a propulsion unit attached to the center assembly. In operation, the profilograph shall be moved longitudinally along the pavement at a speed no greater than 3 MPH so as to reduce bounce as much as possible. The testing equipment and procedure shall comply with the requirements of Department SOP.

The Contractor may elect to use a computerized version of the profilograph in lieu of the standard profilograph. If the computerized version of the profilograph is used, it shall meet the requirements of Subsection 907-804.03.19.7.5.1.

907-804.03.19.7.5.1--Computerized Profilograph.

907-804.03.19.7.5.1.1--General The computerized profilograph, furnished and operated by the Contractor under the supervision of the Engineer, shall be equipped with an on-board computer capable of meeting the following conditions.

Vertical displacement shall be sampled every three (3) inches or less along the bridge deck. The profile data shall be bandpass filtered in the computer to remove all spatial wavelengths shorter than two (2) feet. This shall be accomplished by a third order, low pass Butterworth filter. The resulting band limited profile will then be computer analyzed according to the California Profilograph reduction process to produce the required inches per mile index. This shall be accomplished by fitting a linear regression line to the length of bridge. This corresponds to the perfect placement of the blanking band bar by a human trace reducer. Scallop above and below the blanking band are then detected and totaled according to the California protocol. Bump/Dip analysis shall take place according to the California Profilograph reduction process.

The computerized profilograph shall be capable of producing a plot of the profile and a printout which will give the following data: Stations every twenty five (25) feet, bump/dip height and bump/dip length of specification (3/10 of an inch and 25 feet respectively), the blanking band width, date of measurement, total profile index in inches per mile for the measurement, total length

of the measurement, and the raw inches for each segment.

907-804.03.19.7.5.1.2--Mechanical Requirements. The profilograph shall consist of a frame twenty five (25) feet long supported at each end by multiple wheels. The frame shall be constructed to be easily dismantled for transporting. The profilograph shall be constructed from aluminum, stainless steel and chromed parts. The end support wheels shall be arranged in a staggered pattern such that no two wheels cross a transverse joint at the same time. The relative smoothness shall be measured by the vertical movement of an eight (8) inch or larger diameter sensing wheel at the midpoint of the 25-foot frame. The horizontal distance shall be measured by a twenty (20) inch or larger diameter pneumatic wheel. This profile shall be the mean elevation referenced to the twelve points of contact with the pavement established by the support wheels. Recorded graphical trace of the profile shall be on a scale of one inch equals one inch (full scale) vertical motion of the sensing wheel and one inch equals 25 feet horizontal motion of the profilograph.

907-804.03.19.7.5.1.3--Computer Requirements. The computer shall have the ability to produce output on sight for verification. The computerized output shall indicate the profile index for each specified section of bridge deck. Variable low and high pass third-order Butterworth filtering options shall be available. The printout shall be capable of showing station marks automatically on the output. Blanking band positioning for each specified section of the bridge deck shall be placed according to the least squares fit line of the collected data. Variable bump and dip tests shall be available to show “must correct” locations on the printout. The computer must have the ability to display on screen “must correct” conditions and alert the user with an audible warning when a “must correct” location has been located. The computer must have the ability to store profile data for later reanalysis. The measurement program must be menu driven and PC compatible. User selected options, identification, calibration factors, and time and date stamps shall be printed at the top of each printed report for verification. The control software must be upgradeable. A power source shall be included for each profilograph and be capable of supplying all power needs for a full days testing.

907-804.03.19.8--Finishing Horizontal Surfaces of Footings or Top Slabs of Box Bridges, Culverts, or Other Structures. The finishing of horizontal surfaces of footing or top slabs of box bridges, culverts, or other structures shall be achieved by placing an excess of material in the form and removing or striking off the excess with a template, forcing the coarse aggregate below the mortar surface. After the concrete has been struck off the surface shall be given a Class 6 finish.

907-804.03.19.9--Finishing Exposed Surfaces of Sidewalks. After the concrete has been deposited in place it shall be consolidated and the exposed surface shall be given a Class 6 finish. An edging tool of the required radius shall be used on all edges and at all expansion joints. The surface shall have a granular texture which will not be slick when wet.

Sidewalk surfaces shall be laid out in blocks with an approved grooving tool as shown on the plans or as directed.

907-804.03.20--Opening Bridges.

907-804.03.20.1--Public Traffic. Unless otherwise specified, concrete bridge decks shall be closed to public highway traffic for a period of at least 21 days after placing concrete.

907-804.03.20.2--Construction Traffic. Unless otherwise specified, concrete bridge decks shall be closed to construction traffic for the time required for curing in Subsection 907-804.03.17 and the minimum required compressive strength for the concrete placed is obtained.

907-804.03.21--Final Cleanup. Upon completion of the work all equipment, surplus materials, forms, and waste material shall be removed, the bridge cleaned, and the site of the work given a final cleanup.

907-804.03.22--Precast-Prestressed Concrete Bridge Members.

907-804.03.22.1--General. All installations and plants for the manufacture of precast-prestressed bridge members shall be PCI (Precast / Prestressed Concrete Institute) Certified. Bridge members manufactured in plants or installations not so approved will not be accepted for use in the work. The Contractor or other manufacturer shall employ a technician skilled in the adopted system of prestressing to supervise the manufacturing operations. This technician shall be certified according to the guidelines of this specification. The Contractor shall develop and implement a Quality Control Program as per Division I of PCI Quality Control Manual, 4th Edition. The Quality Control Program shall be submitted to the District Materials Engineer for approval.

907-804.03.22.2--Stressing Requirements. The jacks for stressing shall be equipped with accurate calibrated gauges for registering the jacking pressure. Means shall be provided for measuring elongation of strands to at least the nearest 1/16 inch.

Prior to beginning work, the Contractor or manufacturer shall have all jacks to be used, together with their gauges, calibrated by an approved laboratory. All jacks and gauges shall have an accuracy of reading within two percent. The testing agency shall furnish the Engineer a statement certifying that the jacks and gauges meet this requirement. During the progress of the work, if a gauge appears to be giving erratic results or if the gauge pressure and elongations indicate materially differing stresses, recalibration will be required.

Calibration of jacks and gauges shall be repeated at intervals deemed necessary by the Engineer. These intervals for calibration shall not exceed one year.

Shop drawings of prestressed beams, including an erection plan, shall be submitted in duplicate to the Bridge Engineer for approval prior to manufacture of members.

907-804.03.22.2.1--Methods. Plans for the particular bridge members will show prestressing by one of the following methods:

(A) Pretensioning. The prestressing strands are stressed initially. After the concrete is placed, cured, and has attained the compressive strength shown on the plans, the stress is transferred to the member. The method used for pretensions shall be in accordance to Division V of PCI Quality Control Manual, 4th Edition.

(B) Posttensioning. The posttensioning tendons are installed in voids or ducts and are stressed and anchored after development of the compressive strength specified on the plans. The voids or ducts are then pressure grouted.

(C) Combined Method. Part of the reinforcing is pretensioned and part posttensioned. Under this method all applicable requirements for the two methods specified shall apply to the respective stressing elements being used.

907-804.03.22.2.2--Alternate Details for Prestressed Members. In the event that the Contractor / Manufacturer desires to use materials or methods that differ in any respect from those shown on the plans or described in these specifications, the Contractor shall submit for approval full plan details on acceptable tracings suitable for reproduction and specifications which shall become the property of the Department. In order for alternate materials and/or methods to be considered, they will be required to comply fully with the following:

- A. Provisions equal to those stipulated in these specifications.
- B. Current AASHTO Specifications.
- C. Recommendations of materials manufacturer.
- D. Camber tolerance of beams and spans shown on plans.

Note: Alternate materials and methods will not be authorized on Federal-Aid Projects.

The Engineer shall be the sole judge as to the adequacy and propriety of any variation of materials or methods.

907-804.03.22.2.3--Stressing Procedure.

(A) General. Stressing shall be performed by suitable jacks working against unyielding anchorages and capable of maintaining the required stress for an indefinite period without movement or yielding. Strands may be stressed singularly or in a group.

The tension to be applied to each strand shall be as shown on the plans. The tension shall be measured by both jacking gauges and elongations in the strands and the result shall check within close limits.

It is anticipated that there will possibly be a difference in indicated tension between jack pressure and elongation of about five (5) percent. In this event, the discrepancy shall be placed on the side of slight overstress rather than understress.

In the event of an apparent discrepancy between gauge pressure and elongation of as much as five (5) percent, the entire operation shall be carefully checked, and the source of error determined before proceeding further.

Elongation is to be measured after the strands have been suitably anchored, and all possible slippage at the anchorages has been eliminated.

In all stressing operations, the stressing force shall be kept as nearly symmetrical about the vertical axis of the member as practicable.

(B) Pretensioning. All strands to be prestressed shall be brought to a uniform initial tension prior to being given their full pretensioning. This uniform initial tension of approximately 1000 to 2000 pounds shall be measured by suitable means such as a dynamometer so that its value can be used as a check against elongation computed and measured.

After the initial tensioning, the strand or group shall be stressed until the required elongation and jacking pressure is within the limits specified.

When the strands are stressed in accordance with the plan requirements and these specifications and all other reinforcing is in place, the concrete shall be placed in the prepared forms.

Strand stress shall be maintained until the concrete between anchorages has attained the required compressive strength as determined by cylinder tests, after which the strands shall be cut off flush with the ends of column members, and cut as shown on the plans for beams, girders, etc. Strands shall be cut or released in such a manner that eccentricity of prestress will be kept to a minimum and no damage to the member will result. The strand cutting pattern shall be as shown on the plans or as approved by the Bridge Engineer.

(C) Posttensioning. For all posttensioning tendons/bars the anchor plates shall set exactly normal in all directions to the axis of the tendon/bar. Parallel wire anchorage cones shall be recessed within the beams. Tensioning shall not take place until the concrete has reached the compressive strength shown on the plans.

Elongation and jacking pressures shall make appropriate allowance for all possible slippage or relaxation of the anchorage. Posttensioning tendons/bars shall be stressed in the order and manner shown on the plans.

The units shall be tensioned until the required elongations and jacking pressures are attained and reconciled within the limits specified in Subsection 907-804.03.22.2.3(A) with such overstresses as approved by the Engineer for anchorage relaxation.

Independent references shall be established adjacent to each anchorage to indicate any yielding or slippage that may occur between the time of initial stressing and final release of the strands.

Straight tendons/bars may be tensioned from one end. Unless otherwise specified, curved tendons shall be stressed by jacking from both ends of the tendons.

(D) Combined Method. In the event that girders are manufactured with part of the reinforcement pretensioned and part posttensioned, the applicable portions of the requirements listed herein shall apply to each type.

907-804.03.22.3--Manufacture.

907-804.03.22.3.1--Forms. The forms used for precast-prestressed bridge members shall meet the requirements of Division II of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.2--Placing and Fastening Steel. Placing and fastening of all steel used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.3--Holes for Prestressing Tendons/Bars. Holes provided in girders for prestressing tendons/bars shall be formed by means of inflatable rubber tubing, flexible metal conduit, metal tubing, or other approved means.

907-804.03.22.4--Placing and Curing Concrete.

907-804.03.22.4.1--Placing. The placing of concrete shall meet the applicable requirements of Division III of PCI Quality Control Manual, 4th Edition.

907-804.03.22.4.2--Curing. Initial and accelerated curing of all members shall meet the applicable requirements of Division IV of PCI Quality Control Manual, 4th Edition except for the following listed requirements.

The source of heat for accelerated cure shall be steam. Calibrated thermocouples shall be implanted into the concrete members to monitor areas expected to have maximum and minimum heat. Curing methods and procedures listed in the prestress producer's PCI Quality System Manual shall be approved by the Department before their implementation.

907-804.03.22.4.3--Removal of Side Forms. Side forms may be removed after the concrete has attained sufficient strength to maintain a true section. In order to obtain "sufficient strength", it may be necessary to cure members for 12 hours or more as prescribed in Subsection 907-804.03.22.4.2, or to attain a minimum compressive strength of 1000 psi.

If high-early-strength concrete is obtained by use of low slump (0 to 1.5-inch) concrete, vacuum process, or other approved methods, side forms may be removed earlier; however, approval of the methods and revision from normal schedules will be made only after inspections by the District Materials Engineer and Materials Division have determined that satisfactory results will be attained by the methods and schedules proposed.

907-804.03.22.4.4--Grouting. The holes through posttensioned members in which the tendons are installed shall be equipped with approved grouting vents. All prestressing tendons to be bonded shall be free of dirt, loose rust, grease, or other deleterious substances. Before grouting, the ducts shall be free of water, dirt, and other foreign substances. The ducts shall be blown out with compressed air until no water comes through the ducts. For long members with draped tendons an open tap at low points may be necessary. After completion of stressing, the annular space between sides of tendon and sides of hole shall be grouted as set in the following paragraphs.

With the grouting vent open at one end of the core hole, grout shall be applied continuously under moderate pressure at the other end until all entrapped air is forced out through the open grout vent, as evidenced by a steady stream of grout at the vent. Whereupon, the open vent shall be closed under pressure. The grouting pressure shall be gradually increased to a refusal of at least 75 psi and held at this pressure for approximately 10 seconds, and the vent shall then be closed under this pressure.

Portland cement grout shall consist of a mixture of:

- 1 part Type 1 portland cement
- 1/4 part fly ash
- 3/4 part washed sand *
- 4 to 6 gallons of water per bag of cement.

* all passing No. 16 sieve and not more than 5% retained on No. 30

Water-reducing admixtures, subject to approval by the Engineer, shall be used in accordance with the manufacturer's recommendations.

The grout shall be mixed in a mechanical mixer, shall have the consistency of heavy paint, and shall be kept agitated until placed.

Members shall not be moved before the grout has set, ordinarily at least 24 hours at 80°F or higher.

907-804.03.22.5--Finishing and Marking. Units shall be given a Class 1 finish at the plant and shall be given a Class 2 finish after erection when required.

Recesses in girders at end of diaphragm bars, holes left by form ties, and other surface irregularities shall be carefully cleaned and patched with an approved non-shrink commercial grout or a non-shrinkage mortar of the following composition:

- 1 part Type 1 portland cement
- 1 1/2 to 2 parts fine sand
- 1/2 to 3/4 ounces aluminum powder per bag of cement
- Approved admixture per Subsection 713.02.
- Sufficient water to produce a workable but rather stiff mix.

The units shall be clearly marked in accordance with Department's *Materials Division Inspection, Certification and Testing Manual*.

907-804.03.22.6--Handling, Storage, and Installation. Posttensioned members may be handled immediately after completion of stressing and grout has set. Pretensioned members may be handled immediately after release of tensioning. In either case, the members shall have developed a minimum compressive strength of 4000 psi prior to handling. In the event stressing is not done in a continuous operation, members shall not be handled before they are sufficiently stressed, as determined by the Engineer, to sustain all forces and bending moments due to handling. In the

handling, storage, and transporting of beams or girders, they shall be maintained in an upright position (position as cast) at all times and shall be picked up from points within distance from beam ends equal to beam depth or at pick-up points designated on the plans. Disregard of this requirement and dropping of units may be cause for rejection, whether or not injury to the unit is apparent. Piles shall be picked up and loaded for shipment at points shown by the suspension diagram on the plans. Extreme care shall be used in handling and storing piles to prevent damage. The dropping of a pile may be cause for rejection of same, whether or not there is apparent injury to the member.

Care shall be exercised during the storage, hoisting, and handling of precast units to prevent damage. Damaged units shall be replaced by the Contractor at no additional costs to the State.

When members are stacked for storage, each layer shall be supported at or near the pick-up points. Supports shall be carefully placed in a vertical line in order that the weight of any member will not stress an underlying member. To prevent damage in moving members it is suggested that rigid supports be covered with a cushion of wood or other resilient material.

Members shall not be transported until at least one day after the concrete has reached a compressive strength of 5000 psi or greater strength when shown on the plans.

Piles used in salt water shall not be driven until concrete is seven days old, and air-entrained concrete shall be used in such piles.

After prestressed concrete voided slab units are set, doweled and bolted in their final position the keyways and dowel holes shall be filled with an approved non-shrink grout. Traffic shall not be permitted on the spans for 24 hours after grouting, and heavy construction equipment exceeding 15 tons will not be permitted on the spans for a period of 72 hours after grouting.

Adjacent slab units that mismatch more than one-fourth inch shall be adjusted prior to grouting of the shear keys. The maximum deviation from cross-section and grade (exclusive of camber) at any point shall not exceed one-fourth inch; and when the surface is checked with a ten-foot straightedge applied both parallel and perpendicular to the centerline, the variance shall not exceed one-fourth inch.

In addition to the requirements set out in this section, the applicable requirements of Section 803 shall apply.

907-804.03.22.7--Tolerances for Accepting Precast Prestressed Concrete. Member shall meet the dimension tolerances set by Division VII of PCI Quality Control Manual, 4th Edition.

907-804.03.22.8--Testing of Materials. Concrete and aggregate testing shall meet the requirements of Division VI of PCI Quality Control Manual, 4th Edition, except that the concrete mixture design shall meet the requirements of Subsection 907-804.02.10. Also, in addition to concrete compressive tests samples made for detensioning and 28-day strength, test samples shall be made and tested in order to prove compliance to the requirements of Subsection 907-804.03.22.6 for handling and shipping prestressed members. Compressive strength test cylinders

for detensioning, handling and shipping shall receive the same type curing as the prestressed members for which they represent. Compressive strength samples shall be made each day for each prestress casting bed.

907-804.03.22.9--Testing Personnel. Technicians testing portland cement concrete used in the production of precast-prestressed members shall be PCI Quality Control Technician/Inspector Certified. Each producer of precast-prestressed members shall have at least one PCI Level II certified technician on site during production for Department projects.

907-804.03.22.10--Documentation. The Precast-Prestressed Producer for each precast-prestressed concrete bridge member shall maintain documentation as set forth in the Department's *Materials Division Inspection, Certification and Testing Manual*. Testing and inspection record forms shall be approved by the Central Laboratory and as a minimum contain information listed in Division VI of PCI Quality Control Manual, 4th Edition.

907-804.03.22.11--Use in the Work. Before any precast-prestressed member is incorporated into the work, documentation as described in Subsection 907-804.03.22.10 is required along with visual inspection of the member at the bridge construction site. Project Office personnel as per the Department's *Materials Division Inspection, Certification and Testing Manual* will make visual inspection of the precast-prestressed member at the bridge construction site.

907-804.04--Method of Measurement. Concrete, complete and accepted, will be measured in cubic yards. The concrete volume will be computed from the neat dimensions shown on the plans, except for such variations as may be ordered in writing by the Engineer. The quantity of concrete involved in fillets, scorings, and chamfers one square inch or less in cross-sectional area will be neglected. Deductions shall be made for the following:

- (1) The volume of structural steel, including steel piling encased in concrete.
- (2) The volume of timber piles encased in concrete, assuming the volume to be 0.80 cubic foot per linear foot of pile.
- (3) The volume of concrete piles encased in concrete.

No deduction will be made for the volume of concrete displaced by steel reinforcement, floor drains, or expansion joint material that is one inch or less in width normal to the centerline of the joint. Where railing is bid as a separate item, that portion of the railing above the top of the curb, above the surface of the sidewalk, or above the bridge roadway, as the case may be, will not be included in the measurement of concrete, but will be measured as railing. Massive pylons or posts which are to be excepted from payment for railing and are intended to be measured for as concrete will be so noted on the plans.

When shown on the plans or directed by the Engineer, concrete placed as a seal for cofferdams will be measured by the cubic yard actually in place, except that no measurement will be made of seal concrete placed outside of an area bounded by vertical planes 18 inches outside the neat lines of the footing as shown on the plans or as directed and parallel thereto.

Reinforcing steel will be measured and paid for in pounds as set out in Section 805.

Unless otherwise specified, structural steel will be measured and paid for as set out in Section 810.

Excavation for bridges will be measured and paid for as in Section 801.

Piling will be measured and paid for as set out in Sections 802 and 803.

Railing will be measured and paid for as set out in Section 813.

Prestressed concrete beams and plank will be measured by the linear foot.

Prestressed concrete voided slab units, interior and exterior with railing, and precast concrete caps, intermediate and end cap with winged abutment wall, of the size and type specified will be measured by the unit complete in place and accepted. Railing, winged abutment walls, grout, tie rods, nuts, washers, bearing pads and other appurtenances will not be measured for separate payment.

907-804.05--Basis of Payment. Concrete will be paid for at the contract unit price per cubic yard for the class or classes specified, complete in place. Prestressed concrete beams and plank will be paid for at the contract unit per linear foot of specified size and type.

Prestressed concrete voided slab units and precast caps will be paid for at the contract unit price per each for the specified types and sizes, complete in place and accepted; which price shall be full compensation for furnishing, hauling and erecting the members; including all prestressing reinforcement and other reinforcement in the members. Payment at the contract unit prices bid shall be full compensation for furnishing all materials, equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-804-A: Bridge Concrete, Class ____	- per cubic yard
907-804-B: Box Bridge Concrete, Class ____	- per cubic yard
907-804-C: <u>Length</u> Prestressed Concrete Beam, Type ____	- per linear foot
907-804-D: <u>Length</u> Prestressed Concrete Plank	- per linear foot
907-804-E: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Interior	- per each
907-804-F: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Exterior	- per each
907-804-G: <u>Length</u> Precast Concrete Caps, End Unit with Wall	- per each
907-804-H: <u>Length</u> Precast Concrete Caps, Intermediate Unit	- per each

SECTION 905 PROPOSAL

Date October 20, 2016

SRSP 7207-06(004) LPA/106877-401000

Forrest County, Mississippi

Sirs: The following proposal is made on behalf of Fairley Construction Services, Inc.
of 828 Hwy 11, Petal MS 39465
for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of:

Neel-Schaffer, Inc.

The Specifications are the current Standard Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

Attached hereto is a certified check, cashier's check or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law).

INSTRUCTION TO BIDDERS: Alternate and Optional Items on Bid Schedule.

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.
2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.
3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 102.06 prior to or at the time of execution of the contract.
4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

SECTION 905 PROPOSAL (Continued)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for five percent (5%) of the total bid and hereby agree that in case of my (our) failure to execute the contract and furnish bonds within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the Local Public Agency as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. <u>1</u>	DATED <u>10/17/2016</u>	ADDENDUM NO. _____	DATED _____
ADDENDUM NO. _____	DATED _____	ADDENDUM NO. _____	DATED _____

1. Replace 905-2 in the Special Provision, Proposal and Contract Documents with attached 905-2.
2. Replace sheets 905-3 and 905-4 in the Special Provision, Proposal and Contract Documents with attached Sheets 905-3 and 905-4.

TOTAL ADDENDA: 1
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE October 20, 2016

Fairley Construction Services, Inc.
Contractor

BY [Signature]
Signature

TITLE President

ADDRESS 828 Hwy 11, Petal MS 39465

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of Mississippi and the names, titles and business addresses of the executives are as follows:

<u>Stephen M. Fairley</u>	<u>828 Hwy 11, Petal MS 39465</u>
President	Address

<u>Wesley T. Fairley</u>	<u>828 Hwy 11, Petal MS 39465</u>
Secretary	Address

<u>Wesley T. Fairley</u>	<u>828 Hwy 11, Petal MS 39465</u>
Treasurer	Address

The following is my (our) itemized proposal.

Revised 11/2008

SECTION 905 PROPOSAL (Bid Sheet No. 3-5)

PROJECT NUMBER: SRSP-7207-00(004) LPA / 106877-401000

COUNTY: FORREST

PROJECT DESCRIPTION: SAFE ROUTES TO SCHOOL - HAWKINS SIDEWALK PROJECT

I (We) agree to complete the entire project within the specified contract time.

***** SPECIAL NOTICE TO BIDDERS *****

BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED.

BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATE LOCATED AT THE END OF THE BID SHEETS IS SIGNED.

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
201-C001	1	ACRE	RANDOM CLEARING AND GRUBBING	6,500.00	6,500.00
202-A001	1	LS	REMOVAL OF OBSTRUCTIONS	XXXX	5,500.00
202-B035	307	SQ. YD.	REMOVAL OF CONCRETE SIDEWALK	11.70	3,591.90
202-B076	150	LIN. FT.	REMOVAL OF TRAFFIC STRIPE	3.52	528.00
202-B077	8	EACH	REMOVAL OF TREES 6" AND GREATER	350.00	2,800.00
202-B078	255	SQ. YD.	REMOVAL OF PAVEMENT, ALL TYPES AND DEPTHS	10.00	2,550.00
202-B093	110	LIN. FT.	REMOVAL OF CURB & GUTTER, ALL TYPES	10.00	1,100.00
203-A003	5	CU. YD.	UNCLASSIFIED EXCAVATION, FM, AH	350.00	1,750.00
203-EX017	265	CU. YD.	BORROW EXCAVATION, AH, FME, CLASS B9	12.00	3,180.00
203-G003	265	CU. YD.	EXCESS EXCAVATION, FM, AH	12.50	3,312.50
211-B001	160	CU. YD.	TOPSOIL FOR SLOPE TREATMENT, CONTRACTOR FURNISHED	22.00	3,520.00
907-213-A001	1	TON	AGRICULTURAL LIMESTONE	300.00	300.00
907-216-B001	1,420	SQ. YD.	SOLID SODDING, CENTIPEDE	7.50	10,650.00
219-A001	225	KGAL	WATERING	\$20.00	\$4,500.00
220-A001	1	ACRE	INSECT PEST CONTROL	200.00	200.00
234-A001	400	LIN. FT.	TEMPORARY SILT FENCE	4.00	1,600.00
907-237-A003	100	LIN. FT.	WATTLES, 20"	8.00	800.00
907-246-A002	100	EACH	SANDBAGS	10.00	1,000.00
907-601-B003	2	CU. YD.	CLASS "B" STRUCTURAL CONCRETE, MINOR STRUCTURES	1,620.00	3,240.00
602-A001	300	LBS.	REINFORCING STEEL	3.00	900.00
603-CB014	1	EACH	15" REINFORCED CONCETE END SECTION	750.00	750.00
603-CA129	36	LIN. FT.	15" REINFORCED CONCRETE PIPE, CLASS III, RUBBER TYPE GASKETS	40.00	1,440.00
608-A001	1,595	SQ. YD.	CONCRETE SIDEWALK, WITHOUT REINFORCEMENT	38.00	60,610.00
609-B001	80	LF	CONCRETE CURB HEADER	16.00	1,280.00

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
614-B002	156	SQ. YD.	CONCRETE DRIVEWAY, WITH REINFORCEMENT, 6-INCH THICKNESS	63.00	9,828.00
907-618-A001	1	LS	MAINTENANCE OF TRAFFIC	XXXX	6,500.00
907-618-B001	1	SQ. FT.	ADDITIONAL CONSTRUCTION SIGNS	100.00	100.00
620-A001	1	LS	MOBILIZATION	XXXX	20,570.00
630-A001	146	SQ. FT.	STANDARD ROADSIDE SIGNS, SHEET ALUMINUM, 0.080" THICKNESS	27.00	3,942.00
630-C004	224	LIN. FT.	STEEL U-SECTION POSTS, 3.0 TO 3.5 LB/FT	15.00	3,360.00
907-242-PP102	555	SQ. FT.	BOARDWALK PER PLANS	38.00	21,090.00
907-684-PP002	2	EACH	SCHOOL FLASHER ASSEMBLY, PER PLANS	7,300.00	14,600.00
907-626-E003	1000	LIN. FT.	6" THERMOPLASTIC TRAFFIC STRIPE, CONTINUOUS YELLOW	.88	880.00
907-626-Z003	2672	LIN. FT.	THERMOPLASTIC LEGEND, WHITE 6" EQUIVALENT	2.35	6,279.20
907-626-H005	24	SQ. FT.	THERMOPLASTIC LEGEND, WHITE	29.37	704.88
TOTAL BID					209,456.48

SECTION 905 PROPOSAL (Bid Sheet No. 5-5)

PROJECT NUMBER: SRSP-7207-00(004) LPA / 106877-401000

COUNTY: FORREST

PROJECT DESCRIPTION: SAFE ROUTES TO SCHOOL – HAWKINS SIDEWALK PROJECT

COMPLETE ITEM NOS. 1, 2 AND/OR 3 AS APPROPRIATE, SEE NOTICE TO BIDDERS NO. 5266 AND SUPPLEMENT.

1. I/We agree that no less than 3 percent shall be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE and WBE).
2. Classification of Bidder: Small Business (DBE) ☐ Small Business (WBE) ☐
3. A joint venture with a Small Business (DBE/WBE): YES ☐

*** SIGNATURE STATEMENT***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFY THAT THE FIGURES SHOWN THERIN CONSTITUTE THEIR OFFICIAL BID.



BIDDER'S SIGNATURE

**Certification with regard to the Performance of Previous
Contracts or Subcontracts subject to the Equal Opportunity
Clause and the filing of Required Reports**

The Bidder X, proposed Subcontractor _____, hereby certifies that he has X, has not _____, participated in a previous contract or subcontract subject to the Equal Opportunity Clause, as required by Executive Orders 10925, 11114, or 11246, and that he has _____, has not X, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Fairley Construction Services, Inc.
(COMPANY)
BY [Signature]
President
(TITLE)

DATE: October 20, 2016

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and Subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime Contractors and Subcontractors who have participated in a previous contract or subcontract subject to the Executive orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such Contractors submit a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION**NON-COLLUSION AFFIDAVIT**

(Execute in duplicate)

State of Mississippi

County of ForrestI, Stephen M. Fairley,
(Name of person signing certification)individually, and in my capacity as President of
(Title)Fairley Construction Services, Inc. do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

Fairley Construction Services, Inc., Bidder
(Name of Firm, Partnership, or Corporation)on Project No. SRSP 7207-06(004) LPA/106877-401000in Forrest County(ies), Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in (b) above; and
- d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently \$25,000) which are excluded from the certification requirements.

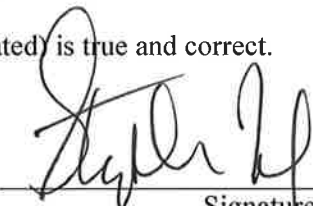
The bidder further certifies, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000. The bidder shall include the language of the certification in all subcontracts exceeding \$100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on October 20, 2016



Signature

(11/23/92F)

LOCAL PUBLIC AGENCY (LPA)

SECTION 902

CONTRACT FOR _____
LOCATED IN THE COUNTY OF _____
STATE OF MISSISSIPPI,

This contract entered into by and between the Local Public Agency _____
_____ (hereinafter "LPA") on one hand, and the undersigned contractor, on the other
witnesseth;

That, in consideration of the payment by the LPA of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the LPA.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the LPA or their authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Mississippi Department of Transportation or Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

Manager, WIN Job Center nearest the project

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the ____ day of _____, 20____.

Contractor(s)

By _____

Title _____

Signed and sealed in the presence of:
(Names and address of witnesses)

By _____

LPA Official

LPA Clerk

Award authorized by the LPA in session on the ____ day of _____, 20____, as recorded _____

LOCAL PUBLIC AGENCY (LPA)

S E C T I O N 9 0 3
PERFORMANCE AND PAYMENT BOND

CONTRACT BOND FOR _____

LOCATED IN THE COUNTY OF _____

STATE OF MISSISSIPPI,

Know all men by these presents: that we, _____
(Contractor)

(hereinafter "Principal"), a _____

residing at _____ in the State of _____

and _____
(Surety)

residing at _____ in the State of _____

authorized to do business in the State of Mississippi, under the laws thereof, as surety, are held and firmly bound

unto the Local Public Agency _____, (hereinafter

"LPA"), in the sum of _____

(\$ _____) Dollars, lawful money of the United States of America, to be

paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or

assigns jointly and severally by these presents.

The conditions of this bond are such, that whereas the said Principal, has (have) entered into a contract with the

LPA, bearing the date of _____ day of _____ A.D. _____ hereto annexed, for the

construction of certain project(s) in the State of Mississippi as mentioned in said contract in accordance with the

Contract Documents therefor, on file in the offices of the LPA.

Now therefore, if the above bounden Principal in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said LPA from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the LPA at the instance of any officer of the LPA authorized in such cases, for double any amount in money or property, the LPA may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the

LOCAL PUBLIC AGENCY (LPA)

Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes, licenses, assessments, contributions, damages, any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the LPA Official, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

_____	_____
(Contractors) Principal	Surety
By _____	By _____
	(Signature) Attorney in Fact
	Address: _____

Title _____	_____
(Contractor's Seal)	(Printed) Mississippi Agent

	(Signature) Mississippi Agent
	Address: _____

	(Surety Seal)

	Mississippi Insurance ID Number

Date 10/8/15

**Guidance for Federal Spending Transparency:
Subaward and Executive Compensation Data
Reporting Requirements for FFATA Implementation**

Summary

1. Prime awardees and sub awardees of Federal financial assistance must report executive compensation data if they meet the statutory reporting thresholds. For the Federal-aid Highway Program, this means that the State, and any subawardees of Federal-aid funds through the State, is subject to the executive compensation reporting requirement.

- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

Background

Beginning October 1, 2010, guidance directs compliance with the Transparency Act to report prime and first-tier subaward data. Federal agencies and prime awardees will report to ensure disclosure of Federal contract and grant subaward and executive compensation data.

The Transparency Act requires information disclosure concerning entities receiving Federal financial assistance through Federal awards such as Federal contracts, sub-contracts, grants, and sub-grants.

Specifically, the Transparency Act's section 2(b)(1) requires the Office of Management and Budget ("OMB") to ensure the establishment of a publicly available website that contains the following information about each Federal award:

- name of the entity receiving the award;
- amount of the award;
- information on the award including transaction type, funding agency, the North American Industry Classification System code or Catalog of Federal Domestic Assistance number, program source, award title descriptive of the purpose of each funding action;

- location of the entity receiving the award and primary location of performance under the award, including city, State, congressional district, and country;
- unique identifier of the entity receiving the award and the parent entity of the recipient, should the entity be owned by another entity; and
- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: SPSP 7207-00(004) LPA/106 877-40600
County: Forrest

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

Firm Name: Traffic Control Products Co., Inc.
Contact Name/Title: Wendy Garner
Firm Mailing Address: P.O. Box 820, Brandon MS 39043
Phone Number: 601-989-2415
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm


SUBMITTED BY (Signature)
Fairley Construction Services, Inc.
FIRM NAME

Submit this form to the LPA as a part of your bid package. If this form is not signed and included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504.

Please make copies of this form when needed and also add those copies to the bid package.

LPA PROJECT

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: SRSP 7207-00(004) LPA/106 877-401000
County: Forrest

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

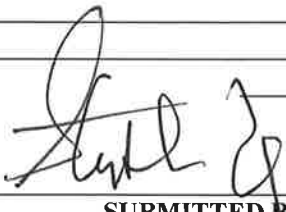
Firm Name: Traffic Control Products Co., Inc.
Contact Name/Title: Wendy Garner
Firm Mailing Address: P.O. Box 820, Brandon MS 39043
Phone Number: 601-939-2415
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm


SUBMITTED BY (Signature)

FIRM NAME

Submit this form to the LPA as a part of your bid package. If this form is not signed and included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504.

Please make copies of this form when needed and also add those copies to the bid package.

*SPECIAL PROVISIONS, PROPOSAL AND CONTRACT DOCUMENTS
FOR*

*THE CONSTRUCTION OF SIDEWALK
FEDERAL AID PROJECT NUMBER
SRSP 7207-00(004) LPA/106877-401000*

***SAFE ROUTES TO SCHOOL
HAWKINS SIDEWALK PROJECT***

***FOR THE
CITY OF HATTIESBURG
HATTIESBURG, MISSISSIPPI
FORREST COUNTY***



2016

PREPARED BY



NEEL-SCHAFFER
Solutions you can build upon

**BIDDER CHECK LIST
(FOR INFORMATION ONLY)**

- _____ All unit prices and item totals have been entered in accordance with Subsection 102.06 of the Mississippi Standard Specifications for Road and Bridge Construction.
- _____ First sheet of SECTION 905--PROPOSAL has been completed.
- _____ Second sheet of SECTION 905--PROPOSAL has been completed and signed.
- _____ Addenda, if any, have been acknowledged. Second sheet of Section 905 listing the addendum number has been substituted for the original second sheet of Section 905. Substituted second sheet of Section 905 has been properly completed, signed, and added to the proposal.
- _____ DBE/WBE percentage, when required by contract, has been entered on last sheet of the bid sheets of SECTION 905--PROPOSAL.
- _____ Form OCR-485-LPA has been completed and signed.
- _____ The last sheet of the bid sheets of SECTION 905--PROPOSAL has been signed.
- _____ Equal Opportunity Clause Certification, when included in contract, has been completed and signed.
- _____ The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been executed in duplicate.
- _____ A certified check, cashier's check or bid bond payable to the Local Public Agency in the principle amount of 5% of the bid has been included with project number identified on same. Bid bond has been signed by the bidder and has also been signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent for the Surety with Power of Attorney attached.
- _____ The Notice to Bidders regarding DUNS Requirements has been completed and included in the contract documents.

Return the proposal and contract documents in its entirety in a sealed envelope. DO NOT remove any part of the contract documents; exception – an addendum requires substitution of second sheet of Section 905. A stripped proposal is considered as an irregular bid and will be rejected.

Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

CONTENTS

PROJECT: SAFE ROUTES TO SCHOOL–HAWKINS SIDEWALK PROJECT
PROJECT NO. SRSP-7207-00(004)LPA/106877-401000
CITY OF HATTIESBURG, MISSISSIPPI

Bidder's Checklist

Section 901 - Advertisement for Bids

Section 904 - Notice to Bidders

#1:	Governing Specifications
#2LPA:	Designating Owner and Engineer
#3:	Final Cleanup
#151:	Gopher Tortoises
#640:	Fiber Reinforced Concrete
#1322:	Non-use of Precast Drainage Units
#1405:	Errata and Modifications to the 2004 Standard Specifications
#1546:	Advancement of Materials
#1902LPA:	Disadvantaged Business Enterprise Forms
#1928:	Federal Bridge Formula
#2168:	Fuel and Material Adjustments
#2382:	Status of Right of Way
#2382:	Attachments for Status of Right of Way
#4488:	DBE Forms, Participation and Payment
#4565:	Manual on Uniform Traffic Control Devices
#4566:	DUNS Requirement
#5053:	Contractor Correspondence
#5266LPA:	Supplement to Disadvantage Business Enterprise
#5266:	Disadvantage Business Enterprise
#5405:	Traffic Control Devices
#5412:	Weight Limits
#5865LPA:	Sampling and Testing of Concrete on Small LPA Projects
#5866LPA:	Payroll Requirements
#7001:	Contract Time

Section 906 - County Wage Rates
Supplement to Form FHWA-1273
Required Federal Contract Provision Form FHWA-1273
Executive Order 11246

Section 907 - 907-101-4: Definitions
 907-102-4LPA: Bidding Requirements and Conditions
 907-103-11: Award and Execution of Contract
 907-104-5: Scope of Work
 907-105-8: Control of Work
 907-107-13: Supplement to Legal Relations & Responsibility to Public

907-107-13:	Legal Relations & Responsibility to Public
907-108-37LPA:	Supplement to Prosecution and Progress
907-108-37LPA:	Prosecution and Progress
907-109-8:	Measurement and Payment
907-110-2:	Wage Rates
907-213-2:	Agricultural Limestone
907-216-1:	Solid Sodding
907-237-4:	Wattles
907-246-3:	Sandbags
907-601-1:	Structural Concrete
907-618-13:	Temporary Construction Signs
907-626-25:	Thermoplastic Traffic Markings
907-701-5:	Supplement to Hydraulic Cement
907-701-5:	Hydraulic Cement
907-707-4:	Rubber Type Gaskets
907-711-4:	Synthetic Structural Fiber Reinforcement
907-713-6:	Admixtures for Concrete
907-714-8:	Miscellaneous Materials
907-715-4:	Roadside Development Materials
907-720-2:	Pavement Marking Materials
907-804-19:	Supplement to Concrete Bridges and Structures
907-804-19:	Concrete Bridges and Structures

Construction Progress Schedule

Section 905 - Proposal

- Proposal, Proposal Sheet
- Bid Sheets
- Certification of Performance – Prior Federal Aid Projects
- Affidavit Regarding Non-Collusion, Debarment and Suspension

Section 902 - Contract Form

Section 903 - Contract Bond Forms

Executive Compensation Certification

Guidance for Federal Spending Transparency

OCR-481-LPA – Disadvantaged Business Enterprise List

OCR-485-LPA – List of Firms Submitting Quotes

(Revisions to the Above Will Be Indicated on the Second Sheet of Section 905 as Addenda)

SECTION 901 - ADVERTISEMENT FOR BIDS

**CITY OF HATTIESBURG
FORREST COUNTY, MISSISSIPPI**

NOTICE TO CONTRACTORS

**SAFE ROUTES TO SCHOOL – HAWKINS SIDEWALK PROJECT
FEDERAL-AID PROJECT NO.
SRSP 7207-00(004) LPA/106877-401000**

Sealed bids will be received by the City of Hattiesburg, at the City Clerk's office, located at 200 Forrest Street, Hattiesburg, Mississippi 39401, until 10:00 a.m. local time, on Thursday, October 20, 2016 for supplying all labor, equipment, and materials (as specified) necessary for the construction of the above referenced project. All bids so received will be publicly opened and read aloud.

Work consists of constructing an 8' wide concrete sidewalk along Gordon's Creek, and a 5' wide concrete sidewalk along Green Street and West Street.

The above general outline of features of the work does not in any way limit the responsibility of the contractor to perform all work and furnish all plant, labor, equipment and materials required by the specifications and the drawings referred to therein.

Plans, contract documents and special provisions and proposal forms are on file for public inspection in the office of the City of Hattiesburg, City Clerk's Office located at 200 Forrest Street, Hattiesburg, Mississippi 39401 and in the office of Neel-Schaffer, Inc., Post Office Box 1487, Hattiesburg, MS 39403-1487 (704 Hardy Street, Telephone No. 601-545-1565). One copy of the contract documents and special provisions together with the contract plans may be procured from Neel-Schaffer, Inc. upon payment of \$100.00, none of which is refundable.

The attention of bidders is directed to the Special Provisions governing selection and employment of labor.

Minimum wage rates for Federal-Aid projects have been predetermined by the Secretary of Labor and are subject to Public Law 87-581 Work Hours Act of 1962, as set forth in the Special Provisions. Minimum wage rates for all other projects have been predetermined and set forth in advertised specifications.

The City of Hattiesburg hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged and women's business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The award of this contract will be contingent upon the Contractor satisfying the DBE/WBE requirements.

The 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction, adopted by the Mississippi Department of Transportation, as referred to herein, may be purchased from the Mississippi Department of Transportation.

Each bid shall be accompanied by a Certified Check on a solvent bank or a Bidder's Bond issued by a Surety Company licensed to operate in the State of Mississippi, in the amount of five percent (5%) of the total bid price, payable to the City of Hattiesburg as bid security. Bidders shall also submit a current financial statement, if requested by the City. The successful bidder will be required to furnish a performance and payment bond in the amount of 100 percent of the contract amount. Both bonds shall be signed or countersigned by a Mississippi Resident Agent.

The proposal and contract documents in its entirety shall be submitted in a sealed envelope and deposited with the City Clerk, 200 Forrest Street, Hattiesburg, Mississippi prior to the hour and date above designated.

The City of Hattiesburg reserves the right to reject any or all proposals, to waive technicalities or irregularities, or to advertise for new proposals, and the decision of the City of Hattiesburg to reject any bid or proposal shall not be cause for any liability or damages against the City of Hattiesburg, any officers or employees.

The bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within the Contract Time. The bidder must also agree to pay as liquidated damages the sum specified in the Standard Specifications per day for each calendar day of overrun in Contract Time that work is not completed.

Work to be performed shall be in accordance with the "Mississippi State Highway Standard Specifications for Road and Bridge Construction, 2004", together with all amendments and/or special provisions and/or addenda to the standards duly approved and adopted, unless otherwise noted in these specifications.

The attention of Bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.



City Clerk
City of Hattiesburg, Mississippi

Dates of Publication:

September 11, 2016

September 18, 2016

 AIA Document A310™ – 2010**Bid Bond****CONTRACTOR:***(Name, legal status and address)*

Fairley Construction Services, Inc.
828 Hwy 11
Petal, MS 39465

SURETY:*(Name, legal status and principal place of business)*

Westfield Insurance Company
P.O. Box 5001
Westfield Center, OH 44251-5001

OWNER:*(Name, legal status and address)*

City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39401

This document has important legal consequences.

Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

BOND AMOUNT: **Five Percent (5%) of the Amount Bid-----**

PROJECT:*(Name, location or address, and Project number, if any)*

Safe Routes to School - Hawkins Sidewalk Project
Federal Aid Project: SRSP 7207-00(004)LPA/106877-401000
Hattiesburg, MS

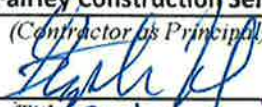
The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

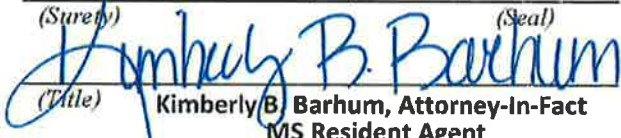
When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this **20th** day of **October**, 2016


(Witness)

Fairley Construction Services, Inc.
(Contractor as Principal) (Seal)

(Title) **Stephen M. Fairley**
President


(Witness)

Westfield Insurance Company
(Surety) (Seal)

(Title) **Kimberly B. Barhum, Attorney-In-Fact**
MS Resident Agent

General
Power
of Attorney

CERTIFIED COPY

POWER NO. 2320202 13

Westfield Insurance Co.
Westfield National Insurance Co.
Ohio Farmers Insurance Co.
Westfield Center, Ohio

Know All Men by These Presents, That WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, corporations, hereinafter referred to individually as a "Company" and collectively as "Companies," duly organized and existing under the laws of the State of Ohio, and having its principal office in Westfield Center, Medina County, Ohio, do by these presents make, constitute and appoint
KIMBERLY B. BARHUM, DAVID R. FORTENBERRY, RICHARD T. JONES, MARY J. NORVAL, JOINTLY OR SEVERALLY

of HATTIESBURG and State of MS its true and lawful Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings, or other instruments or contracts of suretyship.

LIMITATION: THIS POWER OF ATTORNEY CANNOT BE USED TO EXECUTE NOTE GUARANTEE, MORTGAGE DEFICIENCY, MORTGAGE GUARANTEE, OR BANK DEPOSITORY BONDS.

and to bind any of the Companies thereby as fully and to the same extent as if such bonds were signed by the President, sealed with the corporate seal of the applicable Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney(s)-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolution adopted by the Board of Directors of each of the WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY:

"Be It Resolved, that the President, any Senior Executive, any Secretary or any Fidelity & Surety Operations Executive or other Executive shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

The Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements of indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed by the President and sealed and attested by the Corporate Secretary.

"Be It Further Resolved, that the signature of any such designated person and the seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signatures or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached." (Each adopted at a meeting held on February 8, 2000).

In Witness Whereof, WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY have caused these presents to be signed by their National Surety Leader and Senior Executive and their corporate seals to be hereto affixed this 01st day of OCTOBER A.D., 2014.

Corporate
Seals
Affixed



WESTFIELD INSURANCE COMPANY
WESTFIELD NATIONAL INSURANCE COMPANY
OHIO FARMERS INSURANCE COMPANY

By:
Dennis P. Baus, National Surety Leader and
Senior Executive

State of Ohio
County of Medina ss.:

On this 01st day of OCTOBER A.D., 2014, before me personally came Dennis P. Baus to me known, who, being by me duly sworn, did depose and say, that he resides in Wooster, Ohio; that he is National Surety Leader and Senior Executive of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, the companies described in and which executed the above instrument; that he knows the seals of said Companies; that the seals affixed to said instrument are such corporate seals; that they were so affixed by order of the Boards of Directors of said Companies; and that he signed his name thereto by like order.

Notarial
Seal
Affixed



David A. Kotnik, Attorney at Law, Notary Public
My Commission Does Not Expire (Sec. 147.03 Ohio Revised Code)

State of Ohio
County of Medina ss.:

I, Frank A. Carrino, Secretary of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Companies, which is still in full force and effect; and furthermore, the resolutions of the Boards of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seals of said Companies at Westfield Center, Ohio, this 20th day of October A.D., 2016



Frank A. Carrino, Secretary

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Governing Specifications

The current (2004) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation Commission is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained herein. Copies of the specification book may be purchased from the MDOT Construction Division.

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal contain references to the 1990 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2004 Edition of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 2 LPA

CODE: (SP)

DATE: 06/03/2015

SUBJECT: Designating Owner and Engineer (Hattiesburg, Mississippi)

PROJECT: SRSP-7207-00(004) /106877-401000, Forrest County

Any reference in the Contract Documents to the State of Mississippi, Mississippi Department of Transportation, Mississippi Transportation Commission, or any official thereof shall be interpreted to mean *City of Hattiesburg*, the "Owner".

Any reference in the Standard Specifications to the Project Engineer, District Engineer, Office Engineer, or Engineer shall be interpreted to mean the *Engineer for City of Hattiesburg, Mississippi, Neel-Schaffer, Inc.*

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3

CODE: (SP)

DATE: 05/03/2004

SUBJECT: Final Clean-Up

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such as glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 151

CODE: (IS)

DATE: 06/18/2004

SUBJECT: Gopher Tortoises

Bidders are hereby advised that the Contractor will be required to make special considerations regarding gopher tortoises on this project. In addition to the normal required documentation associated with borrow pits, the Contractor shall, for each site used to obtain or dispose of materials associated with this project, provide the Engineer with a letter from a qualified biologist certifying that the site was inspected prior to any clearing of vegetation or disposal of project materials and that the site is not inhabited by gopher tortoises, or appropriate avoidance measures have been installed. No individual lacking the proper State or Federal license shall touch or otherwise harass a gopher tortoise.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 640

CODE: (IS)

| DATE: 09/26/2005

SUBJECT: Fiber Reinforced Concrete

Bidders are hereby advised that synthetic structural fibers meeting the requirements of Subsection 907-711.04 may be used in lieu of wire mesh in some items of construction. Substitution of fibers for wire mesh will be allowed in the construction of paved ditches, paved flumes, paved inlet apron, driveways, guard rail anchors and pile encasements. Substitution in any other items of work must be approved by the State Construction Engineer prior to use.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1322

CODE: (SP)

DATE: 1/22/2007

SUBJECT: Non-Use of Precast Drainage Units

Bidders are hereby advised that the use of precast inlets and junction boxes will **NOT** be allowed on this project. Subsection 601.02.3 states that " the Contractor may request approval from the Engineer to furnish and install precast units in lieu of cast-in-place units". Should the Contractor make this request, the request will be denied.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 1405

CODE: (IS)

| DATE: 03/15/2007

SUBJECT: ERRATA AND MODIFICATIONS TO THE 2004 STANDARD SPECIFICATIONS

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
101	201.01	In the second sentence of the first paragraph, change “salvable” to “salvageable”.
107	202.04	In the fourth sentence of the fourth paragraph, change “yard” to “feet”.
107	202.05	In the list of units measurements for 202-B, add “square foot”.
132	211.03.4	In the second sentence of the second paragraph, change “planted” to “plated”.
| 192	306.02.4	In the first line of the first paragraph, delete the word “be”.
200	307.03.7	In the fourth sentence of the second paragraph, change “lime-fly ash” to “treated”.
236	401.01	Change the header from “Section 403” to “Section 401”.
242	401.02.3.2	In the first sentence of the third full paragraph, add “1/8” in the blank before the inch mark.
250	401.02.6.3	In the second sentence of the first paragraph on page 250, change “rutting over ” ” to “rutting over 1/8" ”.
253	401.02.6.4.2	In the paragraph preceding the table, change “91.0” to “89.0”.
259	401.03.1.4	In the first paragraph, change “92.0 percent” to “the specified percentage (92.0 or 93.0)”.
269	403.03.2	In the table at the top of page 269, change the PI requirement from “ = ” to “ ≤ ”.

278	404.04	In the second sentence, change the subsection from "401.04" to "403.04".
283	409.02.2	Change "PG 64-22" to "PG 67-22".
294	413.02	In the first sentence of the second paragraph, change "707.02.1.3" to "Subsection 707.02.1.3".
340	511.04	In the second sentence of the second paragraph, change "412" to "512".
349	601.03.3	In the first sentence, change "804.03.2" to "804.03.5".
355	603.02	Change the subsection reference for Joint mortar from "707.03" to "714.11".
369	604.04	In the first sentence, change "601.04" to "Subsection 601.04".
427	619.04	Delete the second paragraph.
442	625.04	In the third paragraph, change "626.04" to "Subsection 626.04".
444	626.03.1.2	Delete the third sentence of the first paragraph.
464	631.02	Change the subsection reference for Water from "714.01.0" to "714.01.1".
570	682.03	Change the subsection number from "682-03" to "682.03".
575	683.10.4	Change the subsection number from "683.10.4" to "683.04".
575	683.10.5	Change the subsection number from "683.10.5" to "683.05".
596	701.02	In the table under the column titled "Cementations material required", change Class F, FA" to "Class F FA,".
603	702.11	In the first sentence, change "702.12" to "Subsection 702.12".
612	703.04.2	In the fifth paragraph, delete "Subsection 703.11 and".
616	703.07.2	In the Percentage By Weight Passing Square Mesh Sieves table, change the No. 10 requirement for Class 7 material from "30 - 10" to "30 - 100".

618	703.13.1	In the first sentence of the first paragraph, change “703.09” to “703.06”.
618	703.13.2	In the first sentence, change “703.09” to “703.06”.
671	712.06.2.2	In the first sentence, change “712.05.1” to “Subsection 712.05.1”.
689	714.11.2	In the first sentence, change “412” to “512”.
709	715.09.5	In the first sentence of the first paragraph, change “guage” to “gauge”.
717	717.02.3.4	In the top line of the tension table, change “1 1/2” to “1 1/8” and change “1 1/8” to “1 1/2”.
741	720.05.2.2	In the last sentence of this subsection, change “720.05.2.1” to “Subsection 720.05.2.1”.
827	803.03.2.3.7.5.2	In the first sentence of the second paragraph, change “803.03.5.4” to “803.03.2.3.4”.
833	803.03.2.6	In the first sentence, change “803.03.7” to “803.03.2.5”.
854	804.02.11	In the last sentence of the first paragraph, change “automatically” to “automatic”.
859	804.02.13.1.3	In the last sentence, change Subsection “804.02.12.1” to “804.02.12”.
879	804.03.19.3.2	In the first sentence of the third paragraph, change “listed on of Approved” to “listed on the Approved”.
879	804.03.19.3.2	In the last sentence of the last paragraph, change “804.03.19.3.1” to “Subsection 804.03.19.3.1”.
962	814.02.3	In the first sentence, change “710.03” to “Subsection 710.03”.
976	820.03.2.1	In the first sentence, change “803.02.6” to “803.03.1.7”.
976	820.03.2.2	In the first sentence, change “803.03.9.6” to “803.03.1.9.2”.
985	Index	Change the subsection reference for Petroleum Asphalt Cement from “702.5” to “702.05”.

985	Index	Change the subsection reference for the Definition of Asphaltic Cement or Petroleum Asphalt from "700.2" to "700.02".
985	Index	Change the subsection reference for Automatic Batchers from "501.03.2.4" to "804.02.10.4".
986	Index	Delete "501.03.2" as a subsection reference for Batching Plant & Equipment.
988	Index	Change the subsection reference for the Central Mixed Concrete from "501.03.3.2" to "804.02.11".
988	Index	Change the subsection reference for the Concrete Batching Plant & Equipment from "501.03.2" to "804.02.11".
999	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers.
1001	Index	Change the subsection reference for Edge Drain Pipes from "605.3.5" to "605.03.5".
1002	Index	Change the subsection reference for Metal Posts from "713.05.2" to "712.05.2".
1007	Index	Change the subsection reference for Coarse Aggregate of Cement Concrete Table from "703.3" to "703.03".
1007	Index	Change the subsection reference for Composite Gradation for Mechanically Stabilized Courses Table from "703.8" to "703.08".
1009	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers and Truck Agitators.
1010	Index	Delete reference to "Working Day, Definition of".

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1546

CODE: (SP)

DATE: 05/23/2007

SUBJECT: Advancement of Materials

Bidders are advised that **NO ADVANCEMENT OF MATERIALS**, as addressed in Subsection 109.06.2 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1902 LPA

CODE: (SP)

DATE: 02/26/2010

SUBJECT: Disadvantaged Business Enterprise (DBE) Forms

Anywhere in the plans, proposal and specifications where reference is made to Office of Civil Rights (OCR) Forms, it should be understood to mean Disadvantaged Business Enterprise (DBE) Forms.

The following are equivalent forms:

OCR-481	.....	OCR-481 LPA	.....	DBE-1
OCR-482	.....	OCR-482 LPA	.....	DBE-2
OCR-483	.....	OCR-483 LPA	.....	DBE-3
OCR-484	.....	OCR-484 LPA	.....	DBE-4
OCR-485	.....	OCR-485 LPA	.....	DBE-5
OCR-487	.....	OCR-487 LPA	.....	DBE-7

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 1928

CODE: (IS)

| DATE: 04/14/2008

SUBJECT: Federal Bridge Formula

Bidders are hereby advised that Federal Highway Administration Publication No. FHWA-MC-94-007, **BRIDGE FORMULA WEIGHTS**, dated January 1994, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration
400 7th Street, SW
Washington, DC 20590
(202) 366-2212

or

| http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc_page.htm

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2168

CODE: (SP)

DATE: 11/03/2008

SUBJECT: Fuel and Material Adjustments

Bidders are advised that **NO FUEL OR MATERIAL ADJUSTMENT**, as addressed in Subsection 109.07 of the Standard Specifications, will be allowed on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 2382

CODE: (IS)

| DATE: 02/12/2009

| SUBJECT: Status of Right-of-Way

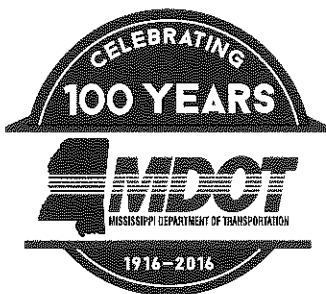
Although it is desirable to have acquired all rights-of-way and completed all utility adjustments and work to be performed by others prior to receiving bids, sometimes it is not considered to be in the public interest to wait until each and every such clearance has been obtained. The bidder is hereby advised of possible unacquired rights-of-way, relocatees and utilities which have not been completed.

| The status of right-of-way acquisition, utility adjustments, [encroachments](#), potentially contaminated sites [and asbestos containment](#) are set forth in [the following](#) attachments.

In the event right of entry is not available to ALL parcels of right-of-way and/or all work that is to be accomplished by others on the date set forth in the contract for the Notice to Proceed is not complete, the Department will issue a restricted Notice to Proceed.

Melinda L. McGrath
Executive Director

P. O. Box 1850
Jackson, MS 39215-1850
Telephone (601) 359-7001
FAX (601) 359-7110
GoMDOT.com



Mark C. McConnell
Deputy Executive Director/Chief Engineer
Lisa M. Hancock
Deputy Executive Director/Administration
Willie Huff
Director, Office of Enforcement
Charles R. Carr
Director, Office of Intermodal Planning

June 1, 2016

Mr. Andrew Hughes
Division Administrator
FHWA-Mississippi Division
100 West Capitol Street, Suite 1062
Jackson, MS 39269

RE: SRSP-7207-00(004) LPA
106877-401000
Safe Routes to School Project
City of Hattiesburg
Forrest County

RIGHT-OF-WAY CERTIFICATION

Dear Mr. Hughes:

This is to certify that all necessary highway rights-of-way, including control of access has been acquired or legal Right of Entry obtained and rights-of-way were acquired in accordance with 49CFR Part 24, **except** as indicated on the Status of Right of Way.

This is to further certify that all individuals and families have been relocated to decent, safe and sanitary housing, or comparable relocatees and the steps relative to relocation advisory assistance administration of the Highway Relocation Assistance Program have been taken, **except** as indicated on the attached Status of Right of Way.

All improvements have been removed from the highway right of way, **except** the improvements to be removed by the Contractor as indicated in the contract plans and as indicated on the attached Status of Improvements.

This project was inspected and there were no visible indications of any Potentially Contaminated Sites on proposed Right of Way, **except** as indicated on the attached Status of Potentially Contaminated Sites. The status of the utilities to be adjusted or relocated is shown in the report attached.

Mr. Andrew Hughes
June 1, 2016
Page 2

Attached:

Right of Way Status
Encroachment Certification
Hazardous Waste Status
Asbestos Abatement Status
Utility Status
Railroad Facilities Status Report

Sincerely,

RIGHT OF WAY DIVISION

A handwritten signature in black ink, appearing to read "Stephen D. Downing".

Stephen D. Downing
Assistant Division Administrator

SDD:ar

Attachments

Pc: Chief Engineer (65-01)
LPA Division (77-01)
Construction Engineer (73-01)
District Six (26-01)
Project Engineer (26-01 PE)
Facility & Maintenance (89-20)
Railroad Facilities Status Report

**STATUS OF RIGHT-OF-WAY
SRSP-7207-00(004) LPA
106877-401000
Safe Routes to School Project
FORREST COUNTY
June 1, 2016**

All rights of way and legal rights of entry have been acquired except:

Exceptions: MS Power poles at STA 26+80 and 30+25 will be designed around to avoid conflict.



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

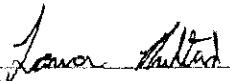
RIGHT OF WAY STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

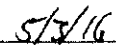
This is to certify that all necessary rights of way, including control of access rights (when pertinent), have been acquired, including legal and physical possession, for the above referenced project in accordance with Federal and State laws, including 49 CFR Part 24. All lands and improvements (if appropriate) are vacant, and the agency has physical possession and the right to enter upon all lands.

Furthermore, this is to certify that there were no individuals or families displaced by this project. Therefore, the 49 CFR Part 24, covering the relocation of displaced persons to decent, safe, and sanitary housing and availability of adequate replacement housing is not, applicable to this project. If persons were displaced, as a result of the project, all individuals and families have been moved from the ROW and relocated in accordance with 49 CFR Part 24.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Signature



Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

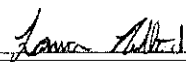
Council - Ward 5
Henry Naylor

ENCROACHMENT STATUS REPORT

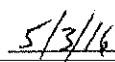
City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

This is to certify that based on a site inspection of the right of way for the project, the project right of way is clear of encroachments.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg



Signature



Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

HAZARDOUS WASTE STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

A physical inspection of the rights of way for this project reveals that there are no sites suspected of having any hazardous waste or underground storage tanks.

If there are suspected sites, these sites are identified and remediation plans are presented below.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

Lamar Rutland
Signature

5/3/16
Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

ASBESTOS ABATEMENT STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

This is to certify that the project does not contain structures that required asbestos abatement.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

Lamar Rutland
Signature

5/3/16
Date



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

UTILITY STATUS REPORT

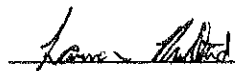
City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

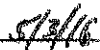
The following is a list of each utility owner on the above mentioned project, describing the status of each utility on the right of way and its impact on the project.

List of Each Utility Owner on the Project	Status of the Conflict with Project Construction
City of Hattiesburg – Water & Sewer	Not in conflict with construction schedule
AT&T	Not in conflict with construction schedule
MS Power	Not in conflict with construction schedule
Willmut Gas	Not in conflict with construction schedule
Comcast Cable	Not in conflict with construction schedule

The above named LPA understands that any claim by the contractor due to NOT having the utilities relocated will be a non-participating item. In the event the utility facilities are discovered to be in conflict, damaged, or otherwise impact the proposed construction, the above named LPA shall bear all responsibility and/or claims associated with these facilities.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg


Signature


Date

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Inter-Departmental Memorandum

TO: Mr. David Seyfarth
District LPA Engineer (16-10)

DATE: May 31, 2016

FROM: Mr. Jared Brogan
Hattiesburg Project Office (16-13)

SUBJECT OR PROJECT NO: SRSP-7207-00(004)LPA/106877-401000
SRTS-Hawkins Sidewalk Project
City of Hattiesburg

COUNTY: Forrest County

INFORMATION COPY TO:

Jeff Altman- State LPA Engineer (77-01)
Kelly Castleberry- District 6 Engineer (26-01)
Sharen Willis

Geoff Crosby-Neel-Schaffer
Lamar Rutland-City of Hattiesburg
Project File (16-13)

STATUS OF UTILITY RELOCATION WORK

AT&T: There are no known conflicts within the scope of this project.

City of Hattiesburg (Sewer & Water): There are no known conflicts within the scope of this project.

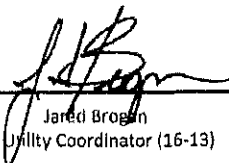
Comcast: There are no known conflicts within the scope of this project.

MS Power: There are no known conflicts within the scope of this project. Poles at station 26+80 and 30+25 will be designed around to avoid conflict.

Willmut Gas: There are no known conflicts within the scope of this project.

There are no other known utility conflicts at this time.

This is to certify that any required adjustments to facilities owned by the above mentioned utility companies have been completed to the best of my knowledge and are acceptable in accordance with the terms of the agreement between the owner and the LPA. Said adjustments are located within the limits of the above mentioned LPA project.


Jared Brogan
Utility Coordinator (16-13)



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1
Kim Bradley

Council - Ward 2
Deborah Denard Delgado

Council - Ward 3
Carter Carroll

Council - Ward 4
Mary Dryden

Council - Ward 5
Henry Naylor

RAILROAD FACILITIES STATUS REPORT

City of Hattiesburg
Safe Routes to School – Hawkins Sidewalk Project
SRSP-7207-00(004)LPA/106877-401000
Forrest County
May 2, 2016

There are no railroads facilities affected by the above referenced project.

Lamar Rutland, P.E.
Engineering Director, City of Hattiesburg

Lamar Rutland
Signature

5/3/16
Date

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4488 LPA

CODE: (IS)

DATE: 05/01/2013

SUBJECT: DBE Forms, Participation and Payment

Bidders are hereby advised that the participation of a DBE Firm cannot be counted towards the Prime Contractor's DBE goal until the amount being counted towards the goal has been paid to the DBE.

Form OCR-482-LPA has been developed to comply with this requirement. Bidders are hereby advised that at the end of the job, the Prime Contractor will submit this form to the Project Engineer before the final estimate is paid and the project is closed out. This form certifies payments to all DBE Subcontractors over the life of the contract.

Form OCR-484-LPA has also been developed to comply with this requirement. Bidders are hereby advised that each month, the Prime Contractors will submit this form to the Project Engineer no later than the last day of each month. This form certifies payments to all Subcontractors and shows all firms even if the Prime Contractor has paid no monies to the firm during that estimate period (negative report). The Project Engineer will attach this form to the monthly estimate before forwarding the estimate to the Local Public Agency (LPA) Division for processing.

Bidders are also advised that Form OCR-485-LPA will be completed by ALL BIDDERS submitting a bid proposal and must be signed and included in the bid proposal package. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

DBE Forms, including Forms OCR-482-LPA, OCR-484-LPA and OCR-485-LPA, can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at www.gomdot.com under *Business, Disadvantaged Enterprise, Applications and Forms for the DBE Program, MDOT Forms*.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4565

CODE: (SP)

DATE: 06/27/2013

SUBJECT: Manual on Uniform Traffic Control Devices

Any reference in the Standard Specifications or contract documents to a particular Section of the Manual on Uniform Traffic Control Devices (MUTCD) it shall mean that Section of the latest version of the Manual on Uniform Traffic Control Devices.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4566

CODE: (SP)

DATE: 07/02/2013

SUBJECT: DUNS Requirement for Federal Funded Projects

Bidders are advised that the Prime Contractor must maintain current registrations in the Central Contractor Registration (<http://www.sam.gov>) at all times during this project. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (<http://www.dnb.com>) is one of the requirements for registration in the Central Contractor Registration.

Bidders are also advised that the following information needs to be completed and included in the bid documents:

DUNS: 965044550

Company Name: Fairley Construction Services, Inc.

Company e-mail address: stephen@fairleyconstruction.com

By: [Signature]

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5053

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Contractor Correspondence

Bidders are advised that all correspondence concerning this project, other than correspondence related to the execution of the contract and sub-contracting, shall be sent to the Project Engineer. The Project Engineer will then forward any necessary correspondence to the appropriate Division. This includes general correspondence, submittals, shop drawings, requests for advancement of materials, etc.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO NOTICE TO BIDDERS NO. 5266 LPA

DATE: 11/15/2014

The goal is 3% percent for the Disadvantaged Business Enterprise. The low bidder is required to submit Form OCR-481 for all DBEs.

Delete the third paragraph under CONTRACT GOAL on page 2, and substitute the following.

The apparent lowest responsive bidder shall submit to the LPA Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, **no later than the 3rd business day after opening of the bids.**

LPA Projects: Delete entire Pre-Bid Section at the top of page 6.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5266

CODE: (IS)

| DATE: 11/12/2014

**SUBJECT: DISADVANTAGED BUSINESS ENTERPRISES IN FEDERAL-AID
HIGHWAY CONSTRUCTION**

This contract is subject to the "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations". Portions of the Act are set forth in this Notice as applicable to compliance by the Contractor and all of the Act, and the MDOT DBE Program, is incorporated by reference herein.

The Department has developed a Disadvantaged Business Enterprise Program that is applicable to this contract and is made a part thereof by reference.

Copies of the program may be obtained from:

Office of Civil Rights
Mississippi Department of Transportation
P. O. Box 1850
Jackson, Mississippi 39215-1850

POLICY

It is the policy of the Mississippi Department of Transportation to provide a level playing field, to foster equal opportunity in all federally assisted contracts, to improve the flexibility of the DBE Program, to reduce the burdens on small businesses, and to achieve that amount of participation that would be obtained in a non-discriminatory market place. In doing so, it is the policy of MDOT that there will be no discrimination in the award and performance of federally assisted contracts on the basis of race, color, sex, age, religion, national origin, or any handicap.

ASSURANCES THAT CONTRACTORS MUST TAKE

MDOT will require that each contract which MDOT signs with a sub-recipient or a Contractor, and each subcontract the Prime Contractor signs with a Subcontractor, includes the following assurances:

“The Contractor, subrecipient or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MDOT deems appropriate.”

DEFINITIONS

For purposes of this provision the following definitions will apply:

"Disadvantaged Business" means a small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individual(s) or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individual(s); and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individual(s) who own it. It is important to note that the business owners themselves must control the operations of the business. Absentee ownership or title ownership by an individual who does not take an active role in controlling the business is not consistent with eligibility as a DBE under CFR 49 Part 26.71.

CONTRACTOR'S OBLIGATION

The Contractor and all Subcontractors shall take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of a portion of the work in this contract and shall not discriminate on the basis of race, color, national origin, religion or sex. Failure on the part of the Contractor to carry out the DBE requirements of this contract constitutes a breach of contract and after proper notification the Department may terminate the contract or take other appropriate action as determined by the Department.

When a contract requires a zero percent (0%) DBE goal, the Contractor still has the responsibility to take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of the work in the contract. In this case, all work performed by a certified DBE firm is considered to be a "race neutral" measure and the Department will receive DBE credit towards the overall State goals when the DBE firm is paid for their work. If the Prime Contractor is a certified DBE firm, the Department can receive DBE credit only for the work performed by the Prime Contractor's work force or any work subcontracted to another DBE firm. Work performance by a non-DBE Subcontractor is not eligible for DBE credit.

CONTRACT GOAL

The goal for participation by DBEs is established for this contract in the attached Supplement. The Contractor shall exercise all necessary and reasonable steps to ensure that participation is equal to or exceeds the contract goal.

The percentage of the contract that is proposed for DBEs (1% or greater) shall be so stated on the last bid sheet of the proposal.

The apparent lowest responsive bidder shall submit to the Office of Civil Rights Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 3rd business day after opening of the bids.

Form OCR-481 is available on the MDOT website at GoMDOT.com, then Divisions, Civil Rights, Forms, DBE, MDOT Projects, or by calling 601-359-7466.

FORMS ARE AVAILABLE FROM THE OFFICE OF CIVIL RIGHTS

The OCR-481 Form must contain the following information:

The name and address of each certified DBE Contractor / Supplier;

The Reference Number, percent of work and the dollar amount of each item. If a portion of an item is subcontracted, a breakdown of that item including quantities and unit price must be attached, detailing what part of the item the DBE firm is to perform and who will perform the remainder of the item.

If the DBE Commitment shown on the last bid sheet of the proposal, does not equal or exceed the contract goal, the bidder must submit, with the proposal, information to satisfy the Department that adequate good faith efforts have been made to meet the contract goal.

Failure of the lowest bidder to furnish acceptable proof of good faith efforts, submitted with the bid proposal, shall be just cause for rejection of the proposal. Award may then be made to the next lowest responsive bidder or the work may be readvertised.

The following factors are illustrative of matters the Department will consider in judging whether or not the bidder has made adequate good faith effort to satisfy the contract goal.

- (1) Whether the bidder attended the pre-bid meeting that was scheduled by the Department to inform DBEs of subcontracting opportunities;
- (2) Whether the bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
- (3) Whether the bidder provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;
- (4) Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested;
- (5) Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goal;
- (6) Whether the bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
- (7) Whether the bidder negotiated in good faith with interested DBEs and did not reject them as unqualified without sound reasons based on a thorough investigation of their capabilities; and

- (8) Whether the bidder made efforts to assist interested DBEs in obtaining any required bonding or insurance.
- (9) Whether the bidder has written notification to certified DBE Contractors soliciting subcontracting for items of work in the contract.
- (10) Whether the bidder has a statement of why an agreement was not reached.

The bidder's execution of the signature portion of the proposal shall constitute execution of the following assurance:

The bidder hereby gives assurance pursuant to the applicable requirements of "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations" that the bidder has made a good faith effort to meet the contract goal for DBE participation for which this proposal is submitted.

DIRECTORY

A list of "Certified DBE Contractors" which have been certified as such by the Mississippi Department of Transportation and other Unified Certification Partners (UPC) can be found on the Mississippi Department of Transportation website at www.gomdot.com. The DBE firm must be certified at the time the project is let and approved by MDOT to count towards meeting the DBE goal.

REPLACEMENT

If a DBE Subcontractor cannot perform satisfactorily, and this causes the OCR-481 commitment to fall below the contract goal, the Contractor shall take all necessary reasonable steps to replace the DBE with another certified DBE Subcontractor or submit information to satisfy the Mississippi Department of Transportation that adequate good faith efforts have been made to replace the DBE. The replacement DBE must be a DBE who was on the Department's list of "Certified DBE Contractors" when the job was let, and who is still active. All DBE replacements must be approved by the Department.

Under no circumstances shall the Prime or any Subcontractor perform the DBE's work (as shown on the OCR-481) without prior written approval from the Department. See "Sanctions" at the end of this document for penalties for performing DBE's work.

When a Contractor proposes to substitute/replace/terminate a DBE that was originally named on the OCR-481, the Contractor must obtain a release, in writing, from the named DBE explaining why the DBE Subcontractor cannot perform the work. A copy of the original DBE's release must be attached to the Contractor's written request to substitute/replace/terminate along with appropriate Subcontract Forms for the substitute/replacement/terminated Subcontractor, all of which must be submitted to the DBE Coordinator and approved, in advance, by MDOT.

GOOD FAITH EFFORTS

To demonstrate good faith efforts to replace any DBE that is unable to perform successfully, the Contractor must document steps taken to subcontract with another certified DBE Contractor. Such documentation shall include no less than the following:

- (1) Proof of written notification to certified DBE Contractors by certified mail that their interest is solicited in subcontracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.
- (2) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (3) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (4) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (5) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (6) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (7) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (8) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

Failure of the Contractor to demonstrate good faith efforts to replace a DBE Subcontractor that cannot perform as intended with another DBE Subcontractor, when required, shall be a breach of contract and may be just cause to be disqualified from further bidding for a period of up to 12 months after notification by certified mail.

PRE-BID MEETING

A pre-bid meeting will be held in Amphitheater 1 & 2 of the Hilton Jackson located at I-55 and County Line Road, Jackson, Mississippi at 2:00 P.M. on the day preceding the date of the bid opening.

This meeting is to inform DBE firms of subcontracting and material supply opportunities. Attendance at this meeting is considered of prime importance in demonstrating good faith effort to meet the contract goal.

PARTICIPATION / DBE CREDIT

Participation shall be counted toward meeting the goal in this contract as follows:

- (1) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (2) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (3) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture.
- (4) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (5) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count sixty percent (60%) of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (6) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (7) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

AWARD

Award of this contract to the low bidder will be contingent upon the following conditions:

- (1) Concurrence from Federal Highway Administration, when applicable.
- (2) Bidder must submit to the Office of Civil Rights for approval, Form OCR-481 (DBE Commitment) no later than the 3rd business day after opening of the bids, or submit information with the bid proposal to satisfy the Department and that adequate good faith efforts have been made to meet the contract goal. For answers to questions regarding Form OCR-481, contact the MDOT Office of Civil Rights at (601) 359-7466.
- (3) Bidder must submit an OCR-485 listing all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. Form OCR-485 must be signed and submitted with the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.

Prior to the start of any work, the bidder must notify the Project Engineer, in writing, of the name of the designated "DBE Liaison Officer" for this project. This notification must be posted on the bulletin board at the project site.

DEFAULT

The contract goal established by MDOT in this proposal of 1% or greater must be met to fulfill the terms of the contract. The Contractor may list DBE Subcontractors and items that exceed MDOT's contract goal, but should unforeseen problems arise that would prevent a DBE from completing its total commitment percentage, the Contractor will meet the terms of the contract as long as it meets or exceeds MDOT's Contract Goal. For additional information, refer to "Replacement" section of this Notice.

DBE REPORTS

- (1) OCR-481: Refer to "CONTRACT GOAL" section of this Notice to Bidders for information regarding this form.
- (2) OCR-482: At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form OCR-482 whereby the Contractor certifies to the amounts of payments made to each Contractor / Supplier. The Project Engineer shall submit the completed Form OCR-482 to the DBE Coordinator (Office of Civil Rights). Final acceptance of the project is dependent upon Contract Administration Division's receipt of completed Form OCR-482 which they will receive from the Office of Civil Rights.
- (3) OCR-483: The Project Engineer/Inspector will complete Form OCR-483, the Commercially Useful Function (CUF) Performance Report, in accordance with MDOT

S.O.P. No. OCR-03-09-01-483. Evaluations reported on this form are used to determine whether or not the DBE firm is performing a CUF. The Prime Contractor should take corrective action when the report contains any negative evaluations. DBE credit may be disallowed and/or other sanctions imposed if it is determined the DBE firm is not performing a CUF. This form should also be completed and returned to the DBE Coordinator (Office of Civil Rights).

- (4) OCR-484: Each month, the Contractor will submit to the Project Engineer OCR-484 certifying payments to all Subcontractors. This OCR-484 will be attached to the monthly estimate for further processing. Failure of the Contractor to submit the OCR-484 will result in the estimate not being processed or paid.
- (5) OCR-485: Bidder must submit signed form with bid proposal of all firms that submitted quotes for material supplies or items to be subcontracted. Please make and add copies of this form when needed or attach additional sheets containing the information required by the form and add these sheets to the bid proposal. If at least one copy of this form is not signed and included as part of bid proposal, your bid will be deemed irregular.
- (6) OCR-487: Only used by Prime Contractors that are certified DBE firms. This form is used in determining the exact percentage of DBE credit for the specified project. It should be returned to MDOT with the OCR-481 form, or can also be returned with the Permission to Subcontract Forms (CAD-720, CAD-725 and CAD-521).

SANCTIONS

The Department has the option to enforce any of the following penalties for failure of the Prime Contractor to fulfill the DBE goal as stated on the OCR-481 form or any violations of the DBE program guidelines:

- (1) Disallow credit towards the DBE goal
- (2) Withhold progress estimate payments
- (3) Deduct from the final estimate or recover an amount equal to the unmet portion of the DBE goal which may include additional monetary penalties as outlined below based on the number of offenses and the severity of the violation as determined by MDOT.

1 st Offense	10% of unmet portion of goal	or	\$5,000 lump sum payment	or	Both
2 nd Offense	20% of unmet portion of goal	or	\$10,000 lump sum payment	or	Both
3 rd Offense	40% of unmet portion of goal	or	\$20,000 lump sum payment	or	\$20,000 lump sum payment and debarment
- (4) Debar the Contractor involved from bidding on Mississippi Department of Transportation projects.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5405

CODE: (SP)

DATE: 02/11/2015

SUBJECT: Traffic Control Devices

Bidders are advised of the following two changes regarding traffic control devices.

Flashing Arrow Panels

In Subsection 619.02.5 of the Standard Specifications, it states that flashing arrow panels shall meet the requirements of Section 6F.53 of the MUTCD. The new MUTCD has changed this reference to Section 6F.61. Flashing arrow panels on this project must meet the requirements of Section 6F.61 of the latest MUTCD.

Type III Barricade Rails

The use of 2-inch nominal thickness timber for rails on Type III barricades has not been approved by NCHRP as a crashworthy device. Therefore, the use of 2-inch nominal thickness timbers will not be allowed for rails on Type III Barricades. Timber rails for Type III Barricades shall be as follows.

- For barricades up to four feet (4') wide, the maximum thickness of timber rails shall be one inch (1") and the material shall be pine timber or ¾-inch ACX plywood.
- For barricades more than four feet (4') wide, timber rails shall be constructed of ¾-inch ACX plywood.

A list of crashworthy Type III Barricades can be found at the below FHWA website.

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5412

CODE: (SP)

DATE: 02/18/2015

SUBJECT: Weight Limits

Bidders are hereby advised that all trucks hauling materials to and from this project shall comply with the legal weight limits as established by law. MDOT will not compensate the Contractor for any portion of a load delivered to the project in excess of the legal limit for that truck.

Vehicles relying on harvest permits are limited to hauling only those materials set forth in Section 27-19-81(4) of the Mississippi Code, as amended.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5865 LPA

CODE: (SP)

DATE: 11/30/2015

SUBJECT: Sampling and Testing of Concrete on Small LPA Projects

Bidders are advised that the following concrete items will be tested at a reduced amount and will not be accepted based on the Quality Control / Quality Assurance (QC/QA) requirements of Section 804 of the specifications.

<u>Section</u>	<u>Description</u>
221	Paved Ditches
601	Minor Structures - manholes, inlets, catch basins, junction boxes, pipe headwalls, and pipe collars.
605	Edge Drain and Underdrain Outlet Pads
606	Guardrail Anchors
607	Fence Post Footings
608	Sidewalks
609	Curb and Gutter
614	Driveways
616	Median and Island Pavement
630	Sign Footings, except Overhead Sign Supports

The material requirements for the above pay items are as follows:

1. Cement and aggregates for concrete items shall be from approved sources. Concrete shall be produced from a concrete batch plant which has a current plant calibration. The Project Engineer shall furnish plant inspection as deemed necessary for control. The producer shall furnish with each load of concrete a delivery ticket containing the following information:
 - a. Project Number
 - b. Class Concrete
 - c. Weight of Cement
 - d. Free Water in Aggregate (gallons)
 - e. Weight of Fine Aggregate
 - f. Weight of Coarse Aggregate
 - g. Water in Mix (gallons)
 - h. Number of Revolutions Mixed
 - i. Time of Batching
2. The Contractor is required to submit mix designs to accomplish this work in accordance with Section 804.
3. A set of three cylinders, slump test, and air test will be performed on the first day of production for each mix design. The compressive strength test shall be the average of three cylinders.
4. An additional set of cylinders, slump test, and air test will be performed at a minimum of rate of one per 100 cubic yards of mix produced.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 5866 LPA

CODE: (SP)

| DATE: 10/28/2015

SUBJECT: Payroll Requirements

Bidders are hereby advised that the Contractor and Subcontractor(s) are required to submit payroll information to the Project Engineers on a weekly basis.

On Federal-Aid Projects, LPA-880, LPA-881 and certified payroll submissions are required each week the Contractor or a Subcontractor performs work on the project. This is addressed in Section IV of Form FHWA-1273.

On State-Funded Projects, LPA-880 is required each week the Contractor or a Subcontractor performs work on the project.

| When no work is performed on either Federal-Aid or State-Funded Projects, the Contractor should only submit LPA-880 showing no work activities.

The Contractor shall make all efforts necessary to submit this information to the Project Engineer in a weekly manner. The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to submit the required information. Submission of forms and payrolls shall be current through the first full week of the month for the estimate period in order for the Project Engineer to process an estimate.

Bidders are advised to review the requirements regarding payroll submissions in Section 110 of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 7001

CODE: (SP)

DATE: 1/7/2015

SUBJECT: Contract Time

PROJECT:

The completion of work to be performed by the Contractor for this project will not be a specified date but shall be when all allowable working days are assessed, or any extension thereto as provided in Subsection 907-108.06.

The Notice of Award will be issued within 60 days of the bid opening date and the effective date of the Notice to Proceed / Beginning of Contract Time Date will be within one months following the Date of the Notice of Execution of Contract Letter.

The Contractor shall request a Notice to Proceed / Beginning of Contract Time Date after receiving the Notice of Execution of Contract Letter and the date requested should be within the one month period following the Date of the Notice of Execution of Contract Letter.

Should the Contractor not request a Notice to Proceed Date within the one months allowed, the date for the Notice to Proceed / Beginning of Contract Time will be one months after the Date of the Notice of Execution of Contract Letter.

44 Working Days have been allowed for the completion of work on this project.

A Preconstruction Conference as required by Subsection 907-108.03.2 should be held prior to commencement of any field work by the Contractor.

General Decision Number: MS160235 04/08/2016 MS235

Superseded General Decision Number: MS20150235

State: Mississippi

Construction Type: Highway

County: Forrest County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	04/08/2016

* ELEC0903-006 12/01/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 25.30	12.5%+4.00

SUMS2010-054 08/04/2014

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 12.00	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 11.54	1.63
HIGHWAY/PARKING LOT STRIPING:		
Truck Driver (Line Striping		
Truck).....	\$ 14.55	0.00
INSTALLER - SIGN.....	\$ 12.19	0.00
INSTALLER: Guardrail.....	\$ 12.39	0.00
IRONWORKER, REINFORCING.....	\$ 16.44	0.00
LABORER: Common or General,		
Including Asphalt Raking,		
Shoveling, Spreading.....	\$ 10.34	0.00
LABORER: Flagger.....	\$ 11.42	0.00
LABORER: Grade Checker.....	\$ 14.82	0.00
LABORER: Luteman.....	\$ 12.88	0.00

LABORER: Mason Tender -		
Cement/Concrete.....	\$ 10.57	0.00
LABORER: Pipelayer.....	\$ 14.50	0.00
LABORER: Laborer-Cones/ Barricades/Barrels -		
Setter/Mover/Sweeper.....	\$ 12.17	0.00
OPERATOR: Asphalt Spreader.....	\$ 14.71	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 14.20	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 11.86	0.00
OPERATOR: Broom/Sweeper.....	\$ 10.94	0.00
OPERATOR: Bulldozer.....	\$ 13.99	0.00
OPERATOR: Concrete Saw.....	\$ 13.93	0.00
OPERATOR: Crane.....	\$ 14.80	0.00
OPERATOR: Distributor.....	\$ 11.46	0.00
OPERATOR: Grader/Blade.....	\$ 16.09	0.00
OPERATOR: Loader.....	\$ 13.99	0.00

OPERATOR: Mechanic.....	\$ 13.00	0.00
OPERATOR: Milling Machine.....	\$ 16.96	0.00
OPERATOR: Oiler.....	\$ 12.22	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 11.56	0.00
OPERATOR: Roller (All Types)....	\$ 12.17	0.00
OPERATOR: Scraper.....	\$ 14.00	0.00
OPERATOR: Tractor.....	\$ 12.00	0.00
SURVEYOR (Staking, Marking and Brush Clearing).....	\$ 11.56	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 14.72	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 14.18	0.00
TRUCK DRIVER: Mechanic.....	\$ 12.31	0.00
TRUCK DRIVER: Water Truck.....	\$ 17.08	0.00
TRUCK DRIVER: Dump Truck (All Types).....	\$ 11.58	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 14.36	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of

the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material,

etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

SUPPLEMENT TO FORM FHWA-1273

DATE: 01/06/2016

SUBJECT: Final Certificate and Contract Provisions for Subcontracts

All subcontracts shall be in writing and contain all pertinent provisions and requirements of the prime contract.

Each "Request for Permission to Subcontract" (Mississippi Department of Transportation Form CAD-720) shall include a copy of subcontract upon request for review by the Mississippi Department of Transportation. The federal contract provisions may be omitted from the subcontract copy submitted for review provided the Contractor certifies that the provisions will be physically incorporated into the agreement furnished to the Subcontractor.

In lieu of submitting a copy of the subcontract for review, the Contractor may certify that the subcontract agreement is in writing and that it contains all the requirements and pertinent provisions of the prime contract.

Each Subcontractor will be required to provide a copy of the subcontract agreement for contract compliance reviews, along with physical evidence (copy of FHWA-1273) that requirements and pertinent provisions have been provided for review and adherence.

The Contractor is hereby advised of the requirements set forth in the following Attachment (Title 46 - Shipping) as it pertains to the implementation of Cargo Preference Act (CPA) requirements in the Federal-aid Highway Program.

By signing this contract, the Contractor agrees to conform to the requirements of the CPA.

Attachment

Title 46- Shipping

Volume: 8

Date: 2014-10-01

Original Date: 2014-10-01

Title: Section 381.7 - Federal Grant, Guaranty, Loan and Advance at Funds Agreements.

Context: Title 46- Shipping. CHAPTER II- MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTATION. SUBCHAPTER J - MISCELLANEOUS. PART 381 - CARGO PREFERENCE-U.S.- FLAG VESSELS.

§ 381.7 Federal Grant, Guaranty, Loan and Advance of Funds Agreements.

In order to insure a fair and reasonable participation by privately owned United States-flag commercial vessels in transporting cargoes which are subject to the Cargo Preference Act of 1954 and which are generated by U.S. Government Grant, Guaranty, Loan and/or Advance of Funds Programs, the head of each affected department or agency shall require appropriate clauses to be inserted in those Grant, Guaranty, Loan and/or Advance of Funds Agreements and all third party contracts executed between the borrower/grantee and other parties, where the possibility exists for ocean transportation of items procured, contracted for or otherwise obtained by or on behalf of the grantee, borrower, or any of their contractors or subcontractors. The clauses required by this part shall provide that at least 50 percent of the freight revenue and tonnage of cargo generated by the U.S. Government Grant, Guaranty, Loan or Advance of Funds be transported on privately owned United States-flag commercial vessels. These clauses shall also require that all parties provide to the Maritime Administration the necessary shipment information as set forth in § 381.3. A copy of the appropriate clauses required by this part shall be submitted by each affected agency or department to the Secretary, Maritime Administration, for approval no later than 30 days after the effective date of this part. The following are suggested acceptable clauses with respect to the use of United States-flag vessels to be incorporated in the Grant, Guaranty, Loan and/or Advance of Funds Agreements as well as contracts and subcontracts resulting therefrom:

(a) *Agreement Clauses.* "Use of United States-flag vessels:

"(1) Pursuant to Pub. L 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

"(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees --

"(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

"(2) To furnish within 20 days following the date of loading for shipments originating within the United

States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

"(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract."

(Reorganization Plans No.21 of 1950(64 Stat. 1273) and No. 7 of 1961 (75 Stat. 840) as amended by Pub. L 91.469 (84 Stat 1036) and Department of Commerce Organization Order 10-8 (38 FR 19707, July 23, 1973)) (42 FR 57126, Nov. 1, 1977]

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goal for female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work, is 6.9%.

Until further notice	Goals for minority participation for each trade (percent)
SHSA Cities:	
Pascagoula - Moss Point -----	16.9
Biloxi - Gulfport -----	19.2
Jackson -----	30.3
SMSA Counties:	
Desoto -----	32.3
Hancock, Harrison, Stone-----	19.2
Hinds, Rankin -----	30.3
Jackson -----	16.9
Non-SMSA Counties:	
George, Greene-----	26.4
Alcorn, Benton, Bolivar, Calhoun, Carroll, Chickasaw, Clay, Coahoma, Grenada, Itawamba, Lafayette, Lee, Leflore, Marshall, Monroe, Montgomery, Panola, Pontotoc, Prentiss, Quitman, Sunflower, Tallahatchie, Tate, Tippah, Tishomingo, Tunica, Union, Washington, Webster, Yalobusha -----	26.5
Attala, Choctaw, Claiborne, Clarke, Copiah, Covington, Franklin, Holmes, Humphreys, Issaquena, Jasper, Jefferson, Jefferson Davis, Jones Kemper, Lauderdale, Lawrence, Leake, Lincoln, Lowndes, Madison, Neshoba, Newton, Noxubee, Oktibbeha, Scott, Sharkey, Simpson, Smith, Warren, Wayne, Winston, Yazoo-----	32.0
Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall-----	27.7
Adams, Amite, Wilkinson -----	30.4

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4.2(d). Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is to the county and city (if any), stated in the advertisement.

5. The notification required in Paragraph 3 shall be addressed to the following:

Contract Compliance Officer
Mississippi Department of Transportation
P.O. Box 1850
Jackson, Mississippi 39215-1850

(06/28/2012)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-101-4

CODE: (IS)

DATE: 11/05/2008

SUBJECT: Definitions

Section 101, Definitions and Terms, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-101.02--Definitions. Replace the following definitions in Subsection 101.02 on pages 3 through 13.

Contract - The written agreement between the Mississippi Transportation Commission and the Contractor setting forth the obligations of the parties thereunder, including but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract includes the invitation for bids, proposal, contract form and contract bonds, specifications, supplemental specifications, interim specifications, general and detailed plans, special provisions, notices to bidders, notice to proceed, and also any agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

Contract Bonds - The approved form of security, executed by the Contractor and the Contractor's Surety(ies), guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the project. This term includes Performance and Payment Bond(s).

Surety - A corporate body, qualified under the laws of Mississippi, which is bound with and for the successful bidder by "contract bond(s)" to guarantee acceptable performance of the contract and payment of all legal taxes and debts pertaining to the construction of the project, including payment of State Sales Tax as prescribed by law, and any overpayment made to the Contractor.

Add the following to the list of definitions in Subsection 101.02 on pages 3 through 13.

Performance Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing satisfactory completion of the contract and all supplemental agreements pertaining thereto.

Payment Bond - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing the payment of all legal debts pertaining to the construction of the project including, but not limited to, the labor and materials of subcontractors and suppliers to the prime contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-4 LPA

CODE: (SP)

DATE: 04/29/2014

SUBJECT: Bidding Requirements and Conditions

907-102.06--Preparation of Proposal. Delete the fifth, sixth, seventh, eighth, and ninth paragraphs of Subsection 102.06 on page 18.

907-102.08--Proposal Guaranty. Delete the two paragraphs in Subsection 102.08 on page 20 and substitute the following:

No proposal will be considered unless accompanied by certified check, cashier's check or bid bond, made payable to the LPA listed in the contract, in an amount of not less than five percent (5%) of the total amount of the proposal offered. The guaranty shall be evidence of good faith that, if awarded the contract, the bidder will execute the contract and give performance and payment contract bond(s) as stipulated in Subsection 907-103.05.1, 907-103.05.2, and as required by law.

If a bid bond is offered as guaranty, the bond must be on a form approved by the Chief LPA Official, made by a Surety acceptable to the Chief LPA Official and signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent and the Bidder. Such bid bond shall also conform to the requirements and conditions stipulated in Subsection 907-103.05.2 as applicable.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-103-11

CODE: (SP)

| DATE: 07/22/2015

SUBJECT: Award and Execution of Contract

Section 103, Award and Execution of Contract, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-103.04--Return of Proposal Guaranty. Delete the second paragraph of Subsection 103.04 on page 23 and substitute the following:

Certified checks or cashier's checks submitted as proposal guaranties, except those of the two lowest bidders, will be returned within 10 days of contract award. The retained proposal guaranty of the unsuccessful of the two lowest bidders will be returned within ten days following the execution of a contract with the successful low bidder. The retained proposal guaranty of the successful bidder will be returned after satisfactory performance and payment bonds have been furnished and the contract has been executed.

In the event all bids are rejected by the Commission, certified checks or cashier's checks submitted as proposal guaranty by all bidders will be returned within 10 days of rejection.

Delete Subsection 103.05 on page 23 and substitute the following:

907-103.05--Contract Bonds.

907-103.05.1--Requirement of Contract Bonds. Prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director a performance and payment bond(s), in a sum equal to the full amount of the contract as a guaranty for complete and full performance of the contract and the protection of the claimants and the Department for materials and equipment and full payment of wages in accordance with Section 65-1-85 Miss. Code Ann. (1972 as amended). In the event of award of a joint bid, each individual, partnership, firm or corporation shall assume jointly the full obligations under the contract and the contract bond(s).

907-103.05.2--Form of Bonds. The form of bond(s) shall be that provided by or acceptable to the Department. These bonds shall be executed by a Mississippi agent or qualified nonresident agent and shall be accompanied by a certification as to authorization of the attorney-in-fact to commit the Surety company. A power of attorney exhibiting the Surety's original seal supporting the Mississippi agent or the qualified nonresident agent's signature shall be furnished with each bond. The Surety company shall be currently authorized and licensed in good standing to conduct business in the State of Mississippi with a minimum rating by A.M. Best of (A-) in the latest printing "Best's Key Rating Guide" to write individual bonds up to ten percent of the policy holders' surplus or listed on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as

published by the United States Department of the Treasury, Financial Management Service, Circular 570 (latest revision as published and supplemented on the Financial Management Service Web site and in the Federal Register) within the underwriting limits listed for that Surety. The Mississippi agent or qualified nonresident agent shall be in good standing and currently licensed by the Insurance Commissioner of the State of Mississippi to represent the Surety company(ies) executing the bonds.

Surety bonds shall continue to be acceptable to the Commission throughout the life of the Contract and shall not be canceled by the Surety without the consent of the Department. In the event the Surety fails or becomes financially insolvent, the Contractor shall file a new Bond in the amount designated by the Executive Director within thirty (30) days of such failure, insolvency, or bankruptcy. Subsequent to award of Contract, the Commission or the Department may require additional security for any supplemental agreements executed under the contract or replacement security in the event of the surety(ies) loss of the ratings required above. Suits concerning bonds shall be filed in the State of Mississippi and adjudicated under its laws without reference to conflict of laws principles.

907-103.08--Failure to Execute Contract. In the first sentence of Subsection 103.08 on page 24, change “bond” to “performance and payment bonds”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-104-5

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Scope of Work

Section 104, Scope of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-104.05--Removal and Disposal of All Materials From the Project. Delete the second sentence of the first full paragraph of Subsection 104.05 on page 30 and substitute the following:

The Contractor shall also furnish the Engineer a certified letter stating that the area of disposal is not in a wetland or in Waters of the U.S.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-105-8

CODE: (SP)

DATE: 11/20/2014

SUBJECT: Control of Work

Section 105, Control of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is modified as follows.

907-105.04--Coordination of Plans, Specifications, Interim Specifications, Special Provisions and Notice to Bidders. Delete the second full paragraph of Subsection 105.04 on page 35, and substitute the following.

In case of a conflict between plan quantities, advertisement quantities, and/or bid sheet quantities, the bid sheet quantities shall prevail.

907-105.05--Cooperation by Contractor. Delete Subsection 105.05 on page 35 and substitute the following.

907-105.05--Cooperation by Contractor. The Contractor shall give the work the attention necessary to expedite its progress, and shall cooperate with the Engineer, inspectors and other Contractors in every possible way.

907-105.05.1--Project Superintendent. The Contractor shall have a competent and experienced full time resident superintendent who is capable of reading and understanding the plans and specifications for the particular work being performed. The superintendent shall be on the project site at any time work is being performed by the Prime Contractor or any Subcontractors. The superintendent shall advise the Project Engineer of an intended absence from the work and designate a person to be in charge of the work during such absence. The superintendent shall receive instructions from the Engineer or authorized representative. Upon issuance of the Notice to Award, the Contractor or duly appointed agent authorized to bind the Contractor shall file with the Executive Director the name and address of the superintendent who will supervise the work with copies to the Construction Engineer, Contract Administration Engineer, District Engineer and Project Engineer. The Executive Director shall be immediately notified in writing with copies to those stated when a change is made in the Contractor's superintendent or superintendent's address. The superintendent shall have full authority to execute orders or directives of the Engineer without delay and to promptly supply materials, equipment, labor and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet.

907-105.05.2--Certified Erosion Control Person. On projects that require an erosion control plan, the Contractor shall also designate a responsible person whose primary duty shall be to monitor and maintain the effectiveness of the erosion control plan, including NPDES permit

requirements. This responsible person must be a Certified Erosion Control Person certified by an organization approved by the Department. Prior to or at the pre-construction conference, the Contractor shall designate in writing the Certified Erosion Control Person to the Project Engineer. The designated Certified Erosion Control Person shall be assigned to only one (1) project. When special conditions exist, such as two (2) adjoining projects or two (2) projects in close proximity, the Contractor may request in writing that the State Construction Engineer approve the use of one (1) Certified Erosion Control Person for both projects. The Contractor may request in writing that the Engineer authorize a substitute Certified Erosion Control Person to act in the absence of the Certified Erosion Control Person. The substitute Certified Erosion Control Person must also be certified by an organization approved by the Department. A copy of the Certified Erosion Control Person's certification must be included in the Contractor's Protection Plan as outlined in Subsection 907-107.22.1. This in no way modifies the requirements regarding the assignment and availability of the superintendent.

907-105.14--Maintenance During Construction. Before the first sentence Subsection 105.14 on page 39, add the following.

The Contractor will be responsible for the maintenance of existing roadways within the limits of this project starting on the date of the Notice To Proceed / Beginning of Contract Time. Anytime work is performed in a travel lane, the Contractor shall install portable lane closure signs meeting the requirement of the MDOT Standard Drawing or MUTCD.

907-105.16--Acceptance. Delete Subsection 105.16 on pages 40 and 41, and substitute the following.

907-105.16--Acceptance.

907-105.16.1--Partial Acceptance of a Unit. When the Contractor has completed a unit of the work such as an interchange, a structure, a portion of the road or pavement or one project of a multi-project contract, the Contractor may request the Engineer to make a final inspection of that unit; or the Executive Director may order a final inspection of the unit if it is in the public's interest. If the Engineer finds upon inspection that the unit has been completed in compliance with the contract and it is a complete facility which can be made available to the public or made available for the prosecution of work under another contract, the Executive Director may conditionally accept the unit and conditionally relieve the Contractor of certain contractual responsibilities as defined in the release.

In the event items of work covered by such release are found to be defective or deficient as evidenced by unsatisfactory test reports of materials incorporated in the work or other engineering determination, the release shall terminate upon written notification to the Contractor. The Contractor shall make all corrections, restorations, constructions or reconstructions deemed necessary and shall resume all contractual responsibilities until all corrective measures have been made in accordance with the terms of the contract.

Partial acceptance does not constitute final acceptance of the work, or any part thereof, nor in any way void or alter any of the terms of the contract.

Relief from "certain contractual responsibilities" as indicated herein may, or may not, include:

- (a) Further maintenance of the defined limits of the partially accepted work.
- (b) Further public liability for the defined limits of the partially accepted work.
- (c) Further liability for liquidated damages as applicable to the value of the partially accepted work when the quantities for the partially accepted work are separate quantities listed on the Summary of Quantities sheet of the plans, and the separate quantities and the total amounts thereof are listed on the Engineer's Estimate. Otherwise, no reduction in liquidated damages will be made because of such partial acceptance.

Unless specifically provided in the contract, the liability for liquidated damages shall not be reduced to less than that applicable under the contract for an amount of such work equal to at least fifty percent (50%) of the total amount of work under the contract.

907-105.16.2--Partial Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection.

If the inspection discloses any work as being unsatisfactory or incomplete, the Engineer will discuss in detail with the Contractor all discrepancies in the work. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed.

However, if during the final inspection the Engineer determines that all work has been satisfactorily completed save that of growth and coverage of plant establishment on all or part of the work, the Engineer may recommend partial release of all work except items related to growth and coverage. Upon such recommendation, the Contractor will be given a partial release of maintenance and shall be released from further contractual liabilities for the completed work. The Contractor will retain responsibility for plant establishment and all maintenance and repairs appurtenant thereto until satisfactory growth and coverage is achieved.

907-105.16.3--Final Maintenance Release of a Project. Upon written notice from the Contractor of presumptive completion of all the work and upon due notice from the Resident or Project Engineer, the Engineer will make an inspection. If all work provided by the contract has been completed to the Engineer's satisfaction, the inspection will constitute the final inspection, and the Engineer will conditionally release the Contractor of maintenance.

As provided in the contract, in the event items of work are found to be deficient or defective as evidenced by unsatisfactory test reports of material incorporated into the work, the Contractor shall assume full responsibility for corrective measures, and shall reassume maintenance and public liability until such corrective measures are completed to the satisfaction of the Engineer.

907-105.16.4.--Final Acceptance of a Project. Upon evidence that the Contractor has fulfilled all obligations under the contract, the Executive Director will make final acceptance and notify the Contractor in writing. Final acceptance of the project will not be given until all obligations imposed under the contract, including but not limited to the final reporting of payrolls, final reporting of DBE payments, acceptable certifications and test reports of materials used, etc., have been fulfilled.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-107-13

DATE: 11/17/2015

SUBJECT: Permits, Licenses and Taxes

After the second paragraph of Subsection 907-107.02 on page 1, add the following.

Prior to commencing work on any Project, the Contractor shall obtain a Material Purchase Certificate number (MPC#) from the Mississippi Department of Revenue, pursuant to Miss. Code Ann. § 27-65-21, and Miss. Admin. Code 35.IV.10.01. Upon receipt of the MPC#, the Contractor must immediately provide the MPC# to the Contract Administration Division of the Department. Failure to obtain and submit a MPC# prior to commencing work shall result in the withholding of payment to the Contractor until such time that a MPC# is obtained and submitted to the Department.

Delete the last sentence of the last paragraph of Subsection 907-107.02 on page 1, and substitute the following.

The Department will notify the Mississippi Department of Revenue of the names and addresses of any Contractors or Subcontractors.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-107-13

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Legal Relations and Responsibility to Public

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-107.02--Permits, Licenses and Taxes. Delete in toto Subsection 107.02 on page 49 and substitute the following.

The Contractor or any Subcontractor shall have the duty to determine any and all permits and licenses required and to procure all permits and licenses, pay all charges, fees and taxes and issue all notices necessary and incidental to the due and lawful prosecution of the work. At any time during the life of this contract, the Department may audit the Contractor's or Subcontractor's compliance with the requirements of this section.

The Contractor or any Subcontractor is advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq. and the Mississippi Use Tax Law, Section 27-67-1, et seq., and their requirements and penalties, apply to any contract or subcontract for construction, reconstruction, maintenance or repairs, for contracts or subcontracts entered into with the State of Mississippi, any political subdivision of the State of Mississippi, or any Department, Agency, Institute of the State of Mississippi or any political subdivision thereof.

The Contractor or any Subcontractor will be subject to one or more audits by the Department during the life of this contract to make certain that all applicable fuel taxes, as outlined in Section 27-55-501, et seq., and any sales and/or use taxes, as outlined in Section 27-67-1, et seq. are being paid in compliance with the law. The Department will notify the Mississippi State Tax Commission of the names and addresses of any Contractors or Subcontractors.

907-107.14--Damage Claims and Insurance.

| **907-107.14.2--Liability Insurance.** Delete Subsection 107.14.2 beginning on page 60 and substitute the following.

907-107.14.2.1--General. The Contractor shall carry Contractor's liability, including subcontractors and contractual, with limits not less than: \$500,000 each occurrence; \$1,000,000 aggregate; automobile liability - \$500,000 combined single limit - each accident; Workers' Compensation and Employers' Liability - Statutory & \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. Each policy shall be signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent of the Insurance Company.

The Contractor shall have certificates furnished to the Department from the insurance companies providing the required coverage. The certificates shall be on the form furnished by the Department and will show the types and limits of coverage.

907-107.14.2.2--Railroad Protective. The following provisions are applicable to all work performed under a contract on, over or under the rights-of-way of each railroad shown on the plans.

The Contractor shall assume all liability for any and all damages to work, employees, servants, equipment and materials caused by railroad traffic.

Prior to starting any work on railroad property, the Contractor shall furnish satisfactory evidence to the Department that insurance of the forms and amounts set out herein in paragraphs (a) and (b) has been obtained. Also, the Contractor shall furnish similar evidence to the Railroad Company that insurance has been obtained in accordance with the Standard Provisions for General Liability Policies and the Railroad Protective Liability Form as published in the Code of Federal Regulations, 23 CFR 646, Subpart A. Evidence to the Railroad Company shall be in the form of a Certificate of Insurance for coverages required in paragraph (b), and the original policy of the Railroad Protective Liability Insurance for coverage required in paragraph (a).

All insurance herein specified shall be carried until the contract is satisfactorily complete as evidenced by a release of maintenance from the Department.

The Railroad Company shall be given at least 30 days notice prior to cancellation of the Railroad Protective Liability Insurance policy.

For work within the limits set out in Subsection 107.18 and this subsection, the Contractor shall provide insurance for bodily injury liability, property damage liability and physical damage to property with coverages and limits no less than shown in paragraphs (a) and (b). Bodily injury shall mean bodily injury, sickness, or disease, including death at anytime resulting therefrom. Property damage shall mean damages because of physical injury to or destruction of property, including loss of use of any property due to such injury or destruction. Physical damage shall mean direct and accidental loss of or damage to rolling stock and their contents, mechanical construction equipment or motive power equipment.

(a) **Railroad Protective Liability Insurance** shall be purchased on behalf of the Railroad Company with limits of \$2,000,000 each occurrence; \$6,000,000 aggregate applying separately to each annual period for lines without passenger trains. If the line carries passenger train(s), railroad protective liability insurance shall be purchased on behalf of the Railroad Company with limits of \$5,000,000 each occurrence; \$10,000,000 aggregate applying separately to each annual period.

Coverage shall be limited to damage suffered by the railroad on account of occurrences arising out of the work of the Contractor on or about the railroad right-of-way, independent of the railroad's general supervision or control, except as noted in paragraph 4 below.

Coverage shall include:

- (1) death of or bodily injury to passengers of the railroad and employees of the railroad not covered by State workmen's compensation laws,
- (2) personal property owned by or in the care, custody or control of the railroads,
- (3) the Contractor, or any of the Contractor's agents or employees who suffer bodily injury or death as a result of acts of the railroad or its agents, regardless of the negligence of the railroads, and
- (4) negligence of only the following classes of railroad employees:
 - (i) any supervisory employee of the railroad at the job site
 - (ii) any employee of the railroad while operating, attached to, or engaged on, work trains or other railroad equipment at the job site which are assigned exclusively to the Contractor, or
 - (iii) any employee of the railroad not within (i) or (ii) above who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or Governmental authority.

(b) **Contractor's Liability - Railroad**, including subcontractors, XCU and railroad contractual with limits of \$1,000,000 each occurrence; \$2,000,000 aggregate. **Automobile** with limits of \$1,000,000 combined single limit any one accident; **Workers' Compensation and Employer's Liability** - statutory and \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. **Excess/Umbrella Liability** \$5,000,000 each occurrence; \$5,000,000 aggregate. All coverage to be issued in the name of the Contractor shall be so written as to furnish protection to the Contractor respecting the Contractor's operations in performing work covered by the contract. Coverage shall include protection from damages arising out of bodily injury or death and damage or destruction of property which may be suffered by persons other than the Contractor's own employees.

In addition, the Contractor shall provide for and on behalf of each subcontractor by means of a separate and individual liability and property damage policy to cover like liability imposed upon the subcontractor as a result of the subcontractor's operations in the same amounts as contained above; or, in the alternative each subcontractor shall provide same.

907-107.15--Third Party Beneficiary Clause. In the first sentence of the first paragraph of Subsection 107.15 on page 61, change "create the public" to "create in the public".

907-107.17--Contractor's Responsibility for Work. Delete the fifth sentence of the fifth paragraph of Subsection 107.17 on page 63 and substitute the following.

The eligible permanent items shall be limited to traffic signal systems, changeable message signs, roadway signs and sign supports, lighting items, guard rail items, delineators, impact

attenuators, median barriers, bridge railing or pavement markings. The eligible temporary items shall be limited to changeable message signs, guard rail items, or median barriers.

907-107.18--Contractor's Responsibility for Utility Property and Services. After the first sentence of Subsection 107.18 on page 63, add the following:

Prior to any excavation on the project, the Contractor shall contact MS 811 and advise them to mark all known utilities in the area of the excavation.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-108-37LPA

DATE: 12/17/2015

SUBJECT: Prosecution and Progress

Delete the first paragraph of Subsection 907-108.03.1 on pages 1 and 2, and substitute the following.

907-108.03.1--Progress Schedule. On working day projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract.

On completion date projects **which include A + B projects**, the Contractor shall furnish a progress schedule and be prepared to discuss both its proposed methodologies for fulfilling the scheduling requirements and its sequence of operations.

The Engineer will review Contractor prepared progress schedules and approve schedules as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer prior to commencing work. The progress schedule shall be a computer generated bar-chart type schedule meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-108-37LPA

CODE: (SP)

DATE: 6/25/2015

SUBJECT: Prosecution and Progress

Section 108, Prosecution and Progress, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-108.01--Subletting of Contract.

907-108.01.1--General. At the end of the last paragraph of Subsection 108.01.1 on page 73, add the following.

The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to make prompt payment within 15 calendar days as required above, or failure to submit the required OCR-484-LPA Form, Certification of Payments to Subcontractors, which is also designed to comply with prompt payment requirements.

907-108.02--Notice To Proceed. Delete the second paragraph of Subsection 108.02 on page 75.

Delete the fourth paragraph of Subsection 108.02 on page 75 and substitute the following.

Upon written request from the Contractor and if circumstances permit, the Notice to Proceed may be issued at an earlier date subject to the conditions stated therein. The Contractor shall not be entitled to any monetary damages or extension of contract time for any delay claim or claim of inefficiency occurring between the early issuance Notice to Proceed date and the Notice to Proceed date stated in the contract.

907-108.03--Prosecution and Progress. Delete Subsection 108.03.1 on pages 75 & 76, and substitute the following.

907-108.03.1--Progress Schedule. On working day and completion date projects, the LPA will furnish the Contractor a progress schedule developed for the determination of contract time which may be used as the contract progress schedule, or the Contractor's own proposed progress schedule may be submitted for approval. If the Contractor elects to furnish a progress schedule for approval by the Engineer, it should be furnished promptly after award of the contract.

The Engineer will review the schedule and approve the schedule as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer and MDOT LPA Coordinator prior to commencing work. The progress schedule shall be a computer generated bar-chart type schedule meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.

When preparing the progress schedule, the Contractor shall include the following:

- Show a time scale to graphically show the completion of the work within contract time.
- Define and relate activities to the contract pay items.
- Show all activities in the order the work is to be performed including submittals, submittal reviews, fabrication and delivery.
- Show all activities that are controlling factors in the completion of the work.
- Show the time needed to perform each activity and its relationship in time to other activities.

This progress schedule shall provide a bar for each major phase of construction such as, but not limited to, clearing and grubbing, grading, drainage structures, bridges, base, shoulders, paving, etc. with an estimated start working day and completion working day for each bar, all within the specified contract time.

A revised progress schedule may be required within ten days of the occurrence of any one of the following conditions:

- when a major change occurs in the work
- when a time extension is granted
- when the progress schedule becomes unrealistic

The Engineer's approval of the aforementioned Progress Schedules does not waive any contract requirements.

In the event the Contractor has not submitted an approvable progress schedule by the beginning of contract time, the progress schedule prepared by the LPA shall be the approved progress schedule and used to assess contract time.

An approved progress schedule shall be in effect until the date on which a revised schedule is approved. The approved progress schedule will be the basis for contract time assessment.

When a Critical Path Method (CPM) schedule is required in the proposal, this schedule will be used in lieu of the bar graph progress schedule in evaluating work progress. In such case, the same time frame noted in this subsection for the original submittal along with the update requirements will apply.

907-108.03.2--Preconstruction Conference. Delete the first paragraph of Subsection 108.03.2 on page 76 and substitute the following.

Prior to commencement of the work, a preconstruction conference shall be held for the purpose of discussing with the Contractor essential matters pertaining to the prosecution and satisfactory completion of the work. The Contractor will be responsible for scheduling the preconstruction conference. The Contractor will advise the Project Engineer in writing 14 days prior to the requested date that a conference is requested. The preconstruction conference will be coordinated through the MDOT LPA Coordinator to insure that the proper MDOT representatives are in

attendance. When the contract requires the Contractor to have a certified erosion control person, the Contractor's certified erosion control person shall be at the preconstruction conference. The local public agency will arrange for utility representatives and other affected parties to be present.

Delete the third paragraph of Subsection 108.03.2 on page 76.

907-108.06--Determination and Extension of Contract Time. Delete Subsections 108.06.1 and 108.06.2 on pages 79 thru 85 and substitute the following.

907-108.06.1--Based on [Working Day](#) Completion.

907-108.06.1.1--General. Contract Time will be established on the basis of [an allowable number of Working Days](#), as indicated in the contract. [A working day is defined as a day the Contractor worked or could have worked in accordance with the conditions set forth in Subsection 907-108.06.1.2, Subparagraphs \(a\) and \(b\), except during the months of December, January, and February.](#)

[During the months of December, January, and February, time will be assessed in the miscellaneous phase regardless of whether or not the Contractor actually works. The value for the time on any particular day will be determined by dividing the number of anticipated working day shown in the following table by the number of days in the particular month. This number will be expressed to three decimal places \(0.000\)](#)

The span of time allowed for the completion of the work included in the contract will be indicated in the contract documents and will be known as "Contract Time".

907-108.06.1.2--Contract Time. The following TABLE OF ANTICIPATED [WORKING DAYS](#) indicates an average/anticipated number of [working](#) days per month.

TABLE OF ANTICIPATED **WORKING** DAYS

Month	WORKING Days
January	6
February	7
March	11
April	15
May	19
June	20
July	21
August	21
September	20
October	16
November	11
December	5
Calendar Year	172

NOTE: The above Table is for informational purposes only. The actual working day total as assessed by the Project Engineer on Form CSD-765 shall govern.

Available **working** days will start being assessed at the original Notice to Proceed/Beginning of Contract Time date set in accordance with the contract, regardless of whether or not the Contractor has been issued an early Notice to Proceed.

Available **working** days will be based on soil and weather conditions and other specific conditions cited in the contract. The Engineer will determine on each applicable day the extent to which work in progress could have been productive, regardless of whether the Contractor actually worked.

An available **working** day will be assessed as follows:

(a) Any day of the week, Monday through Friday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works or could have worked for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works or could work four but less than six consecutive hours, one-half (0.5) of an available work day will be charged for that day. When the Contractor works or could work six or more consecutive hours during the day, one (1.0) available work day will be charged for that day, **and**

(b) Any Saturday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works for six (6) or more consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works less than four consecutive hours during the day, no time will be charged for that day. When the Contractor works four but less than six consecutive hours,

one-half (0.5) of an available work day will be charged for that day. When the Contractor works six or more consecutive hours during the day, one (1.0) available work day will be charged for that day.

Should the weather or other conditions be such that four (4) consecutive satisfactory hours are not available prior to noon (for daytime operations) or midnight (for nighttime operations), no time will be assessed for that day regardless of the above conditions. However, if the Contractor elects to work, time will be assessed in accordance with the previous paragraphs.

Time will not be charged during any required waiting period for placement of permanent pavement markings as set forth in Subsection 618.03 provided all other work is complete except growth and coverage of vegetative items as provided in Subsection 210.01.

Each month the Engineer will complete, and furnish to the Contractor, an "Assessment Report of Working Days" (CSD-765). This report shows the number of working days assessed during the estimate period and the cumulative working days assessed to date. The Contractor should review the Engineer's report as to the accuracy of the assessment and confer with the Resident or Project Engineer to rectify any differences. Each should make a record of the differences, if any, and conclusions reached. In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 15 calendar days following the ending date of the monthly report in question to file a protest Notice of Claim in accordance with the provisions of Subsection 105.17. Otherwise, the Engineer's assessment shall be final unless mathematical errors of assessment are subsequently found to exist, and any claim of the Contractor as to such matter shall be waived.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage of time elapsed will be determined by comparing the working days assessed to-date on Form CSD-765 to the total allowable working days for the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.1.3--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

An extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes, named tropical storms,

tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Working Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be on a working day basis.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

If the contract time of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the working days are exhausted, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.1.4--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges for the remaining working days will resume. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.06.2--Based on Specified Completion Date.

907-108.06.2.1--General. Contract Time will be established on the basis of a Specified Completion Date indicated in the Contract, or as determined by the Contractor in accordance with the contract documents. The span of time allowed for the completion of the work included in the contract will be known as "Contract Time".

For contracts in which a Specified Completion Date is indicated in the Contract, the span of Contract Time shall be the number of Calendar Days specified in the Contract.

For contracts in which a Completion Date is determined by the Contractor (A + B Contracts), the span of Contract Time shall be between the date of the Notice to Proceed and the date representing the number of Calendar Days determined by the Contractor to complete the work.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

At any given date, the ratio of the accumulated monetary value of that part of the work actually accomplished to the total contract bid amount adjusted to reflect approved increases or decreases shall determine the "percent complete" of the work.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage elapsed time shall be calculated as a direct ratio of the expired Calendar Days to the total Calendar Days provided for in the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

907-108.06.2.2--Extension of Time. The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

On all completion date contracts, an extension of contract time may be granted for unforeseen utility delays, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes,

named tropical storms, tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Calendar Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.

Any extension of contract time will be based on a calendar day basis, excluding Saturdays, Sundays or legal holidays recognized by the Department in Subsection 108.04.1.

If the contract time of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 907-108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the specified completion date, or authorized extension thereof, and until all work under the contract is completed.

907-108.06.2.3--Cessation of Contract Time. When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges will resume. If the specified completion date had not been reached at the time the Contractor called for a final inspection, the calendar day difference between the specified completion date and the date the Contractor called for a final inspection will be added after the 14-day period before starting liquidation damages. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

907-108.07--Failure to Complete the Work on Time. Delete the Schedule of Deductions table in Subsection 108.07 on page 85, and substitute the following.

Schedule of Deductions for Each Day of Overrun in Contract Time

Original Contract Amount		Daily Charge
From More Than	To and Including	Per Calendar Day
\$ 0	100,000	\$ 150
100,000	500,000	360
500,000	1,000,000	540
1,000,000	5,000,000	830
5,000,000	10,000,000	1,200
10,000,000	20,000,000	1,800
20,000,000	-----	3,500

907-108.10--Termination of Contractor's Responsibility. In the last sentence of Subsection 108.10 on page 88, change “bond” to “performance and payment bond(s)”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-109-8

CODE: (SP)

| DATE: 09/10/2015

SUBJECT: Measurement and Payment

Section 109, Measurement and Payment, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-109.01--Measurement of Quantities. Delete the third full paragraph of Subsection 109.01 on page 90 and substitute the following.

When requested by the Contractor, material specified to be measured by the cubic yard or ton may be converted to the other measure as appropriate. Factors for this conversion will be determined by the District Materials Engineer and agreed to by the Contractor. The conversion of the materials along with the conversion factor will be incorporated into the contract by supplemental agreement. The supplemental agreement must be executed before such method of measurement is used.

After the second sentence of the fourth full paragraph of Subsection 109.01 on page 90, add the following.

Where loose vehicle measurement (LVM) is used, the capacity will be computed to the nearest one-tenth cubic yard and paid to the whole cubic yard. Measurements greater than or equal to nine-tenths of a cubic yard will be rounded to the next highest number. Measurements less than nine-tenths of a cubic yard will not be rounded to the next highest number. Example: A vehicle measurement of 9.9 cubic yards will be classified as a 10-cubic yard vehicle. A vehicle measurement of 9.8 cubic yards will be classified as a 9-cubic yard vehicle.

907-109.04--Extra and Force Account Work. Delete the first paragraph under Subsection 109.04 on page 91, and substitute the following.

When extra work results for any reason and is not handled as prescribed elsewhere herein, the Engineer and the Contractor will attempt to agree on equitable prices. When such prices are agreed upon, a Supplemental Agreement will be issued by the Engineer.

When the Supplemental Agreement process is initiated, the Contractor will be required to submit to the Engineer a detailed breakdown for Material, Labor, Equipment, Profit and Overhead. The total allowable markup (which includes Prime Contractor and Subcontractor work, if applicable) for Supplemental Agreement work shall not exceed 20%, which also includes tax and bond.

The requirement for detailed cost breakdowns may be waived when a Department's Bid Item History exists for the proposed item(s), and the Contractor's requested price, including mark-up, is within 20% of the Department's Bid History cost for that item(s). In any case, the Department reserves the right to request detailed cost breakdowns from the Contractor on any Supplemental Agreement request.

When equitable prices cannot be agreed upon mutually by the Engineer and the Contractor, the Engineer will issue a written order that work will be completed on a force account basis to be compensated in the following manner:

In the last sentence of subparagraph (b) in Subsection 109.04 on page 91, change "bond" to "bond(s)".

Delete the first and second paragraphs of subparagraph (d) in Subsection 109.04 on page 92 and substitute the following.

Equipment. For any machinery or special equipment, other than small tools, authorized by the Engineer, the Contractor will use the rates shown in the book entitled "Rental Rate Blue Book For Construction Equipment" as published by EquipmentWatch® and is current at the time the force account work is authorized, unless otherwise allowed by the Engineer. This book shall be used to determine equipment ownership and operating expense rates. These rates do not include allowances for operating labor, mobilization or demobilization costs, overhead or profit, and do not represent rental charges for those in the business of renting equipment. Operating labor and overhead cost will be allowed. Subject to advance approval of the Engineer, actual transportation cost for a distance of not more than 200 miles will be reimbursed for equipment not already on the project. The cost of transportation after completion of the force account work will be reimbursed except it cannot exceed the allowance for moving the equipment to the work.

907-109.06--Partial Payment.

907-109.06.1--General. Delete the fourth and fifth sentences of the third paragraph of Subsection 109.06.1 on page 94, and substitute the following.

In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 25 calendar days following the Contractor's receipt of the monthly estimate in question to file in writing, a protest Notice of Claim in accordance with the provisions Subsection 105.17. Otherwise, the Engineer's estimated quantities shall be considered acceptable pending any changes made during the checking of final quantities.

907-109.06.2--Advancement on Materials. Delete Subsection 109.06.2 on pages 94 & 95, and substitute the following.

907-109.06.2--Advancement on Materials. Partial payments may include advance payment for certain nonperishable or durable materials such as base aggregates, reinforcing steel, bridge piling, structural steel, prefabricated bridge components, traffic signal equipment, electrical equipment, fencing materials, and sign materials with approval of the Engineer. Advance payment may be requested for structural steel members provided fabrication has been completed and the members have been declared satisfactory for storage by a Department representative. The Contractor must make a written request to the Project Engineer for advanced payment and furnish written consent of the Surety. To qualify for advance payment, materials must be stored or stockpiled on or near the project or at other locations approved by the Engineer; or in the case of precast concrete members, treated timber, guard posts and other approved preprocessed durable and bulky materials, the materials may be stored at the commercial producer's yard provided it is located in Mississippi; or in the case of prestressed concrete members that may

require being produced at an out-of-state location, the prestress members shall be produced and may be stored at the commercial manufacturer's yard provided it is a PCI certified plant on the Department's List of Approved Prestress & Precast Plants and it is located within the continental United States; or in the case of structural steel members that may require fabrication at an out-of-state location, the fabricated members may be stored at the location of the commercial fabricator's yard provided it is located within the continental United States.

Advancements will not be allowed until the Project Engineer has received copies of material invoices and certified test reports or acceptable certificates of conformance, and in the case of materials stored at the commercial producer's/fabricator's yard, the material shall be positively identified for the specific project and a Certificate of Storage issued by the Department or a designated representative of the Department. Requests for advancements on fabricated structural steel members and prestress concrete members stored out-of-state will be denied when the Department does not have available a designated representative to issue a Certificate of Storage.

The Contractor shall make suitable arrangements to the satisfaction of the Engineer for storage and protection at approved sites or, in the case of materials stored at the commercial producer's yard located in Mississippi or, in the case of fabricated structural steel members stored at the commercial fabricator's yard or prestress concrete members stored at a commercial manufacturer's yard located within the continental United States, the Contractor shall make arrangements with the producer/fabricator for suitable storage and protection. If advanced payment is allowed and the materials are damaged, lost, destroyed or for any reason become unacceptable, the previous payments will be deducted from subsequent estimates until the materials are replaced or restored to an acceptable condition. In all cases, the Contractor shall save harmless the Commission in the event of loss or damage, regardless of cause.

An invoice or an accumulation of invoices for each eligible material must total \$10,000 or more before consideration will be given for making advanced payment. When allowed, advance payment will be based on verified actual material cost plus transportation charges to the point of storage. Sales tax, local haul and handling costs shall not be included as material cost.

Advanced payment shall not exceed 100% of the invoice price or 75% of the total contract bid price for the pay item, whichever is less.

Advanced payment for a component of a pay item shall not exceed 95% of the invoice price or 75% of the total contract bid price for the pay item of which the material is a part, whichever is less.

Advanced payment will be made only on materials that will be incorporated permanently in the project.

No advanced payment will be made on minor material items, hardware, etc.

No advanced payment will be made for materials when it is anticipated that those materials will be incorporated into the project within 60 calendar days.

Advanced payment will be paid for those materials which are not readily available, and which can be easily identified and secured for a specific project and for which lengthy stockpiling periods would not be detrimental.

Where a storage area is used for more than one project, material for each project shall be segregated from material for other projects, identified, and secured. Adequate access for auditing shall be provided. All units shall be stored in a manner so that they are clearly visible for counting and/or inspection of the individual units.

Unless specifically provided for in the contract, advance payment will not be made on materials, except for fabricated structural steel members or prestress concrete members, stored or stockpiled outside of the State of Mississippi.

Materials for which an advanced payment has been allowed must be paid for by the Contractor within 60 days of the estimate on which the advanced payment was first allowed and proof of said payment must be verified by the supplier. If proof of payment is not furnished within the allowable 60 days, the advanced payment will be deducted on subsequent current estimates until such time proof of payment is furnished.

As the materials are incorporated into the work, proportionate reductions for advance payments shall be made from monthly estimates covering the work performed. Calculation of percentage of completion, or rate of progress, shall be based on completed work and no consideration will be given to stockpiled materials.

907-109.07--Changes in Material Costs. Delete the third full paragraph of Subsection 109.07 on page 96 and substitute the following.

A link to the established base prices for bituminous products and fuels will be included in the contract documents under a Notice to Bidders entitled "Petroleum Products Base Prices."

Delete the last paragraph of Subsection 109.07 on pages 97 & 98, and substitute the following.

Adjustments herein provided shall not apply to fuels consumed or materials incorporated into the work during any monthly estimate period falling wholly after the expiration of contract time as defined in Subsection 101.02 of the applicable Mississippi Standard Specifications for Road and Bridge Construction, and as determined by checked final quantities.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-110-2

CODE: (SP)

| DATE: 04/02/2010

SUBJECT: Wage Rates

Section 110, Required Contract Provisions, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-110.02--Application. Delete Subsection 110.02.2 on page 100 and substitute the following.

907-110.02.2--Wage Rates. All persons employed or working upon the site of the work will be paid at wage rates not less than those contained in the wage determination decision of the Secretary of Labor in effect 10 days prior to taking bids.

| Bidders are advised that regardless of the wage rates listed in the Supplement to FHWA 1273 in the contract, minimum federal wage rates must be paid.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-213-2

CODE: (IS)

| DATE: 01/25/2008

SUBJECT: Agricultural Limestone

Section 907-213, Fertilizing, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-213.05--Basis of Payment. Delete the first sentence of the first paragraph of Subsection 213.05 on page 136 and add the following as the first paragraph of this subsection.

| Hard rock agricultural limestone will be paid for at the contract unit price per ton. Hard rock agricultural limestone with a relative neutralizing value (RNV), determined in accordance with Subsection 907-715-02.2.1.3, of between 60.0% and 62.9% will be paid for at half (½) the contract unit price per ton. No payment will be made for hard rock agricultural limestone with an RNV less than 60.0%.

Delete the first pay item listed on page 137 and substitute the following:

907-213-A: Agricultural Limestone

- per ton

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-216-1

CODE: (IS)

DATE: 05/22/2013

SUBJECT: Solid Sodding

Section 216, Solid Sodding, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-216.04--Method of Measurement. Delete the third and fourth paragraphs of Subsection 216.04 on page 144.

907-216.05--Basis of Payment. Delete the first paragraph of Subsection 216.05 on pages 144 and 145, and substitute the following.

Solid sodding will be paid for at the contract unit price per square yard, which price shall be full compensation for all labor, equipment, materials, tools, ground preparation, fertilization, and all incidentals necessary to complete the work.

Add the "907" prefix to the pay items listed on page 145.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-237-4

CODE: (SP)

| DATE: 03/13/2012

SUBJECT: Wattles

Section 907-237, Wattles, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-237 - WATTLES

907-237.01--Description. This work consists of furnishing, constructing and maintaining wattles for the retention of soil around inlets, swale areas, small ditches, sediment basins and other areas as necessary. Also, the work includes removing and disposing of the wattles and silt accumulations.

Measurement and payment for wattles will be made only when a pay item is included in the bid schedule of the proposal. The quantity is estimated for bidding purposes only and will be dependent upon actual conditions which occur during construction of the project.

| **907-237.02--Materials.** Wattles used around inlets shall have a diameter of twelve inches (12") and a length adequate to meet field conditions. Wattles used at other locations shall have a diameter of twenty inches (20") and a length adequate to meet field conditions. The minimum diameter for the above wattle sizes shall be one inch (1") less than the specified diameter.

The stakes used in securing the wattles in place shall be placed approximately three feet (3') apart throughout the length of the wattle. Stakes shall be wooden and of adequate size to stabilize the wattles to the satisfaction of the Engineer.

In addition to the requirements of this specifications, wattles shall be listed on the Department's "Approved Sources of Materials".

907-237.03--Construction Requirements.

907-237.03.1--General. The wattles shall be constructed at the locations and according to the requirements shown on the erosion control plan.

907-237.03.2--Maintenance and Removal. The Contractor shall maintain the wattles and remove and dispose of silt accumulations.

When the wattles are no longer needed, they shall be removed and the Contractor shall dispose of silt accumulations and treat the disturbed areas in accordance with the contract requirements.

907-237.04--Method of Measurement. Wattles of the size specified will be measured per linear foot.

907-237.05--Basis of Payment. Wattles, measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for installation, maintaining and removal of the wattles, the removal and disposal of silt accumulations and any required restoration of the disturbed areas.

Payment will be made under:

907-237-A: Wattles, Size

- per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-246-3

CODE: (SP)

DATE: 11/08/2010

SUBJECT: Sandbags and Rockbags

Section 907-246, Sandbags and Rockbags, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-246 -- SANDBAGS AND ROCKBAGS

907-246.01--Description. This item of work shall consist of the furnishing, installing, and maintaining sandbags and rockbags for the purpose of temporary erosion control by intercepting and slowing the flow of sediment-laden runoff water, or for use as a temporary dam.

907-246.02--Materials. The filler material for sandbags shall consist of a fine aggregate meeting the requirements of Subsection 703.02. The filler material for rockbags shall consist of a size 57 aggregate meeting the requirements of Subsection 703.03.

The bag material shall be woven polypropylene, polyethylene or polyamide fabric with a minimum unit weight of four (4) ounces per square yard. The bags shall be a minimum of 21 inches in length, 12 inches in width, and four (4) in thickness when filled.

907-246.03--Construction Requirements. Sandbags and rockbags shall be used to construct a berm/dam which will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Sand or rock shall be placed in the bag so that at least the top six (6) inches of the bag is unfilled to allow for proper tying of the open end. Any subsequent rows of bags shall be offset one-half the length of the preceding row to provide a layered brick-type arrangement.

The sandbag and rockbag berm/dam installation shall be maintained in good condition by the Contractor. All necessary work and materials to maintain the integrity of the installation shall be provided until earthwork construction is complete and permanent erosion-control features are in place. The maintenance of the bags will not be paid for separately and will be included in the cost for sandbags or rockbags.

907-246.04--Method of Measurement. Sandbags and rockbags will be measured per linear foot or each.

Sandbags and rockbags measured by the linear foot shall be in accordance with the details in the erosion control drawing. The length of the sandbag or rockbag berm/dam will be measured end-to-end along the cross-section of the ditch in accordance with the erosion control drawing.

907-246.05--Basic of Payment. Sandbags and rockbags, measured as prescribed above, will be

paid for per linear foot or each, which prices shall be full compensation for furnishing bags, fine aggregate, size 57 aggregate, placement of bags, maintenance of the installation, removal and disposal of the sediment deposits and removal after construction has been completed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

907-246-A: Sandbags - per linear foot or each

907-246-B: Rockbags - per linear foot or each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-601-1

CODE: (IS)

DATE: 08/29/2007

SUBJECT: Structural Concrete

Division 600, Incidental Construction, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the heading **DIVISION 600 - INCIDENTAL CONSTRUCTION**, add the following:

Unless otherwise specified, all testing of Portland cement concrete in Division 600 shall be in accordance with the requirements of Subsection 907-601.02.1.

907-601.02--Materials.

907-601.02.1--General. Delete the second and third sentence of the first paragraph of Subsection 601.02.1 on page 348, and substitute the following:

Sampling and testing will be in accordance with TMD-20-04-00-000 or TMD-20-05-00-000, as applicable.

907-601.03.6.3--Removal of Falsework, Forms, and Housing. Delete the first paragraph, the table and second paragraph of Subsection 601.03.6.3 on pages 349 and 350, and substitute the following:

The removal of falsework, forms, and the discontinuance of heating, shall be in accordance with the provisions and requirements of Subsection 907-804.03.15, except that the concrete shall conform to the following compressive strength requirements:

Wingwall and Wall Forms not Under Stress	1000 psi
Wall Forms under Stress	2200 psi
Backfill and Cover clear	2400 psi

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Subsection 907-804.03.15. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of Subsection 907-804.03.15. Technicians using the maturity meter or calculating strength/maturity graphs shall meet the requirements of Subsection 907-804.03.15.

907-601.05--Basis of Payment. Add the “907” prefix to the pay items listed on page 352.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-618-13

CODE: (SP)

DATE: 06/03/2014

SUBJECT: Temporary Construction Signs

Section 618, Maintenance of Traffic and Traffic Control Plan, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-618.03--Construction Requirements.

907-618.03.2--Barricades, Signs, and Flaggers. Delete the second paragraph of Subsection 618.03.2 on page 414, and substitute the following.

Flaggers shall be stationed at such points as may be deemed necessary.

Temporary construction signs shall be removed as their use becomes inapplicable. However, placing temporary signs and their supports flat on the ground outside the shoulder break line will be allowed.

907-618.05--Basis of Payment. Delete the first two pay items listed on page 418, and substitute the following.

907-618-A: Maintenance of Traffic - lump sum

907-618-B: Additional Construction Signs - per square foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-626-25

CODE: (IS)

DATE: 11/13/2012

SUBJECT: Thermoplastic Traffic Markings

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-626.01--Description. After the last sentence of the first paragraph of Subsection 626.01 on page 443, add the following.

All pavement marking material, excluding edge lines over rumble strips, shall be applied using the extrusion/ribbon method. Edge lines placed over rumble strips shall be applied using the atomization/spray method.

907-626.03.1.1--Equipment. After the second paragraph of Subsection 626.03.1.1 on page 444, add the following.

When edge lines are placed over rumble strips, the equipment must be able to apply the marking material using the atomization/spray method instead of extrusion/ribbon method.

907-626.03.1.2--Construction Details. Delete the second sentence of the first full paragraph of Subsection 626.03.1.2 on page 445, and substitute the following.

Unless otherwise specified in the plans or contract documents, the thickness shall be 90 mils for edge lines, center lines, lane lines, barrier lines and detail stripe including gore markings, and 120 mils for crosswalks, stop lines, and railroad, word and symbol markings.

After the last sentence of the third full paragraph of Subsection 626.03.1.2 on page 445, add the following.

When double drop thermoplastic stripe is called for in the contract, additional beads by the drop-on method shall be applied as follows.

Class A glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.
Class B glass beads at a rate of not less than three pounds of beads per 100 feet of six-inch stripe.

The Class B glass beads shall be applied to the newly placed stripe first, followed by the application of the Class A glass beads.

907-626.05--Basis of Payment. Delete the pay items listed on page 446 and substitute the following.

907-626-A: 6" Thermoplastic* Traffic Stripe, Skip White	- per linear foot or mile
907-626-B: 6" Thermoplastic* Traffic Stripe, Continuous White	- per linear foot or mile
907-626-C: 6" Thermoplastic* Edge Stripe, Continuous White	- per linear foot or mile
907-626-D: 6" Thermoplastic* Traffic Stripe, Skip Yellow	- per linear foot or mile
907-626-E: 6" Thermoplastic* Traffic Stripe, Continuous Yellow	- per linear foot or mile
907-626-F: 6" Thermoplastic* Edge Stripe, Continuous Yellow	- per linear foot or mile
907-626-G: Thermoplastic* Detail Stripe, <u>Color</u>	- per linear foot
907-626-H: Thermoplastic* Legend, White	- per linear foot or square foot

* Indicate Double Drop if applicable

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-701-5

DATE: 09/17/2014

SUBJECT: Hydraulic Cement

In the last paragraph of Subsection 907-701.04.1.1 on page 3, change “AASHTO Designation: M 240, Table 3” to “AASHTO Designation: M 240, Table 4”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-701-5

CODE: (SP)

| DATE: 08/20/2014

SUBJECT: Hydraulic Cement

Section 701, Hydraulic Cement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete Subsection 701.01 on pages 595 & 596, and substitute the following:

907-701.01--General. The following requirements shall be applicable to hydraulic cement:

Only hydraulic cements conforming to Section 701 shall be used. Hydraulic cements shall not be listed or designated as meeting more than one AASHTO or Department type.

Different brands of hydraulic cement, or the same brand of hydraulic cement from different mills, shall not be mixed or used alternately in any one class of construction or structure, without written permission from the Engineer; except that this requirement will not be applicable to hydraulic cement treatment of design soils, or bases.

The Contractor shall provide suitable means for storing and protecting the hydraulic cement against dampness. Hydraulic cement, which for any reason, has become partially set or which contains lumps of caked hydraulic cement will be rejected. Hydraulic cement salvaged from discarded or used bags shall not be used.

The temperature of bulk hydraulic cement shall not be greater than 165°F at the time of incorporation in the mix.

Acceptance of hydraulic cement will be based on the certification program as described in the Department's Materials Division Inspection, Testing, and Certification Manual and job control sampling and testing as established by Department SOP.

Retests of hydraulic cement may be made for soundness and expansion within 28 days of test failure and, if the hydraulic cement passes, it may be accepted. Hydraulic cement shall not be rejected due to failure to meet the fineness requirements if upon retests after drying at 212°F for one hour, it meets such requirements.

Delete Subsection 701.02 on page 596, and substitute the following:

907-701.02--Portland Cement.

907-701.02.1--General.

907-701.02.1.1--Types of Portland Cement. Portland cement (cement) shall be either Type I or Type II conforming to AASHTO Designation: M85. Type III cement conforming to AASHTO Designation: M85 or Type III (MS), as defined by the description below Table 1, may be used for the production of precast or precast-prestressed concrete members.

907-701.02.1.2--Alkali Content. All cement types in this Subsection shall meet the Equivalent alkali content requirement for low-alkali cements listed in AASHTO Designation: M85, Table 2.

907-701.02.2--Replacement by Other Cementitious Materials. The maximum replacement of cement by weight is 25% for fly ash or 50% for ground granulated blast furnace slag (GGBFS). The minimum tolerance for replacement shall be 5% below the maximum replacement content. Replacement contents below this minimum tolerance by fly ash or GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of cement by fly ash or GGBFS.

907-701.02.2.1--Portland Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater. When portland cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash, GGBFS, or silica fume shall be as follows in Table 1.

Table 1- Cementitious Materials for Soluble Sulfate Conditions

Sulfate Exposure	Water-soluble sulfate (SO ₄) in soil, % by mass	Sulfate (SO ₄) in water, ppm	Cementitious material required*
Moderate and Seawater	0.10 - 0.20	150 - 1,500	Type II **, ***, **** cement, or Type I cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume
Severe	0.20 - 2.00	1,500 - 10,000	Type I cement with a replacement by weight of 50% GGBFS, or Type II cement with one of the following replacements of cement by weight: 25% Class F fly ash, 50% GGBFS, or 8% silica fume

* The values listed in this table for replacement of portland cement by the cementitious materials listed are maximums and shall not be exceeded. The

minimum tolerance for replacement shall be 0.5% below the maximum replacement content. Replacement contents below this minimum tolerance by the cementitious materials listed in this table do not meet the requirements for the exposure conditions listed and shall not be allowed.

** Type III cement conforming to AASHTO Designation: M85 with a maximum 8% tricalcium aluminate (C_3A) may be used in lieu of Type II cement as allowed in Subsection 907-701.02.1; this cement is given the designation "Type III(MS)".

*** Blended cement meeting the sulfate resistance requirements of Subsection 907-701.04 may be used in lieu of Type II as allowed in Subsection 907-701.04.

**** Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.02.2.

Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed above.

907-701.02.2.2--Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater. When portland cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 907-701.02.2.1. Silica fume shall be used to bring the cementitious materials into compliance with the requirements of Table 1.

Delete Subsection 701.03 on page 596, and substitute the following:

907-701.03--Masonry Cement. Masonry cement shall conform to ASTM Designation: C 91 and shall only be used in masonry applications.

Delete Subsection 701.04 on page 596, and substitute the following:

907-701.04--Blended Hydraulic Cement.

907-701.04.1--General.

907-701.04.1.1--Types of Blended Cement. Blended hydraulic cements (blended cements) shall be of the following types and conform to AASHTO Designation: M 240:

Type IS – Portland blast-furnace slag cement

Type IP – Portland-pozzolan cement

Type IL – Portland-limestone cement

Blended cement Types IS and IP for use in portland cement concrete or soil stabilization exposed to the moderate soluble sulfate condition or exposure to seawater as defined in Table 1 shall meet the Sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3 and the "(MS)" suffix shall be added to the type designation.

907-701.04.1.2--Alkali Content. All blended cement shall be made with clinker that would result in cement meeting the requirements of Subsection 907-701.02.1.2 when used in the production of AASHTO Designation: M 85, Type I or Type II cement.

907-701.04.2--Replacement by Other Cementitious Materials. The maximum replacement of blended cement Type IL by weight is 35% for fly ash or 50% for GGBFS. Replacement contents below 20% fly ash or 45% GGBFS may be used, but shall not be given any special considerations, like the maximum acceptance temperature for portland cement concrete containing pozzolans. Special considerations shall only apply for replacement of blended cement by fly ash or GGBFS. No additional cementitious materials, such as Portland cement, performance hydraulic cement, fly ash, GGBFS, metakaolin, or others, shall be added to or as a replacement for blended cement Types IS and IP.

907-701.04.3--Exposure to Soluble Sulfate Conditions or Seawater. When portland cement concrete or blended cement for soil stabilization is exposed to moderate soluble sulfate conditions or to seawater, where the moderate soluble sulfate condition is defined in Table 1, the blended cement shall meet the sulfate resistance requirement listed in AASHTO Designation: M 240, Table 3.

When portland cement concrete or blended cement for soil stabilization is exposed to severe soluble sulfate conditions, where the severe soluble sulfate condition is defined in Table 1, blended cements shall not be used.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-707-4

CODE: (SP)

DATE: 04/24/2012

SUBJECT: Rubber Type Gaskets

Section 707, Joint Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-707.04--Rubber Type Gaskets for Joining Conduit. In the first sentence of Subsection 707.04 on page 636, delete the reference to “AASHTO Designation: M 315” and substitute “ASTM Designation: C 443”.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-711-4

CODE: (IS)

DATE: 06/26/2009

SUBJECT: Synthetic Structural Fiber Reinforcement

Section 711, Reinforcement and Wire Rope, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After Subsection 711.03.4.3 on page 665, add the following:

907-711.04--Synthetic Structural Fiber. The synthetic structural fibers shall be approved for listing in the Department's "Approved Sources of Materials" prior to use. The synthetic structural fibers shall be added to the concrete and mixed in accordance with the manufacturer's recommended methods.

907-711.04.1--Material Properties. The fibers shall meet the requirements of ASTM Designation: C 1116, Section 4.1.3. The fibers shall be made of polypropylene, polypropylene/polyethylene blend, nylon, or polyvinyl alcohol (PVA).

907-711.04.2--Minimum Dosage Rate. The dosage rate shall be such that the average residual strength ratio ($R_{150,3.0}$) of fiber reinforced concrete beams is a minimum of 20.0 percent when the beams are tested in accordance with ASTM Designation: C 1609. The dosage rate for fibers shall be determined by the following.

The fiber manufacturer shall have the fibers tested by an acceptable, independent laboratory acceptable to the Department and regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology and approved to perform ASTM Designations: C 39, C 78, and C192.

The laboratory shall test the fibers following the requirements of ASTM Designation: C 1609 in a minimum of three (3) test specimens cast from the same batch of concrete, molded in 6 x 6 x 20-inch standard beam molds meeting the requirements of ASTM Designation: C 31. The beams shall be tested on an 18-inch span. The tests for $R_{150,3.0}$ shall be performed when the average compressive strength of concrete used to cast the beams is between 3500 and 4500 psi. The tests for compressive strength shall follow the requirements of ASTM Designation: C 39. The average compressive strength shall be determined from a minimum of two (2) compressive strength cylinders.

The value for $R_{150,3}$ shall be determined using the following equation:

$$R_{150,3.0} = \frac{f_{150,3.0}}{f_1} \times 100$$

The residual flexural strength ($f_{150,3.0}$) shall be determined using the following equation:

$$f_{150,3.0} = \frac{P_{150,3.0} \times L}{b \times d^2}$$

where:

$f_{150,3.0}$ is the residual flexural strength at the midspan deflection of $L/150$, (psi),

$P_{150,3.0}$ is the residual load capacity at the midspan deflection of $L/150$, (lbf),

L is the span, (in),

b is the width of the specimen at the fracture, (in), and

d is the depth of the specimen at the fracture, (in).

For a 6 x 6 x 20-inch beam, the $P_{150,3.0}$ shall be measured at a midspan deflection of 0.12 inch.

Additionally, $R_{150,3.0}$, $f_{150,3.0}$, and $P_{150,3.0}$ may also be referred to as R_{150}^{150} , f_{150}^{150} , and P_{150}^{150} respectively.

At the dosage rate required to achieve the minimum $R_{150,3}$, the mixture shall both be workable and the fibers shall not form clumps.

The manufacturer shall submit to the State Materials Engineer certified test reports from the independent laboratory showing the test results of each test specimen.

907-711.04.3--Job Control Requirements. The synthetic structural fibers shall be one from the Department's "Approved Sources of Materials."

At the required dosage rate, the mixture shall both be workable and the fibers shall not form clumps to the satisfaction of the Engineer. If the mixture is determined by the Engineer to not be workable or have clumps of fibers, the mixture may be rejected.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-713-6

CODE: (SP)

DATE: 03/17/2016

SUBJECT: Admixtures for Concrete

Section 713, Concrete Curing Materials and Admixtures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

After the second paragraph of Subsection 713.01.2 on page 676, add the following.

Type 1-D compound may be used on bridge rails, median barriers, and other structures requiring a spray finish. When Type 1-D compound is used, it will be the responsibility of the Contractor to assure that the compound has dissipated from the structure prior to applying the spray finish and that the spray finish adheres soundly to the structure.

Delete Subsection 713.02 on pages 676 & 677, and substitute the following.

907-713.02--Admixtures for Concrete. Air-entraining admixtures used in Portland cement concrete shall comply with AASHTO Designation: M 154. Set-retarding, accelerating, and/or water-reducing admixtures shall comply with AASHTO Designation: M 194. Water-reducing admixture shall meet the minimum requirements for Type A. Set-retarding admixtures shall meet the minimum requirements for Type D. Admixtures providing a specific performance characteristic(s) other than those of water reduction or set retardation shall meet the minimum requirements for Type S. For admixtures meeting the requirements for Type S, the manufacturer shall provide data to substantiate the specific performance characteristic(s) to the satisfaction of the State Materials Engineer.

In order to obtain approval of an admixture, the State Materials Engineer shall have been furnished certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO Standard Specification.

The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

After an admixture has been approved, the Contractor shall submit to the State Materials Engineer, with each new lot of material shipped, a certification from the manufacturer in accordance with the requirements of Subsection 700.05.1 and stating the material is of the same composition as

originally approved and has not been changed or altered in any way. The requirement in Subsection 700.05.1(b) is not required on the certification from the manufacturer.

Admixtures containing chlorides will not be permitted.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

Admixtures shall only be used in accordance with the manufacturer's recommended dosage range as set forth in the manufacturer's approval request correspondence. When an admixture is used in Portland cement concrete, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.1--Source Approval. In order to obtain approval of an admixture, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the admixture meets all the requirements of the applicable AASHTO or Department Specification for the specific type and the dosage range for the specific type of admixture.

907-713.02.2--Specific Requirements. Admixtures containing chlorides will not be permitted.

907-713.02.3--Acceptance. The Department reserves the right to sample, for check tests, any shipment or lot of admixture delivered to a project.

The Department reserves the right to require tests of the material to be furnished, using the specific cement and aggregates proposed for use on the project, as suggested in AASHTO Designation: M 154 and outlined in AASHTO Designation: M 194.

Failure to maintain compliance with any requirement of these specifications shall be cause for rejection of any previously approved source or brand of admixture.

With each new lot of material shipped the Contractor shall submit to the State Materials Engineer, a notarized certification from the manufacturer showing that the material complies with the requirements of the applicable AASHTO or Department Specification.

When an admixture is used, it shall be the responsibility of the Contractor to produce satisfactory results.

907-713.02.4--Waterproofing Admixture. This product is used as a waterproofing admixture for cast in place concrete bridge decks and bridge deck topping.

The Contractor shall submit manufacturer's product data and installation methods for each type of the products required to demonstrate the product complies with specifications.

The materials shall be installed in accordance with manufacturer's instructions.

The waterproofing admixture shall be one of the following, or an approved equal.

- Xypex Admix
- Everdure Caltite
- Hycrete W1000

The dosage rate for the above admixtures shall be as follows:

- Xypex Admix shall be 15 pounds per cubic yard.
- Everdure Caltite shall be a minimum of 1.5% by weight of cement.
- Hycrete W1000 shall be a minimum one (1) gallon per cubic yard.

Any retardation of set that occurs will depend upon the concrete mix design and the dosage rate of the admixture.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-714-8

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Miscellaneous Materials

Section 714, Miscellaneous Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-714.05--Fly Ash. Delete Subsections 714.05.1 & 714.05.2 on pages 680 & 681, and substitute the following.

907-714.05.1--General. The fly ash source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of fly ash shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

Different classes of fly ash or different sources of the same class shall not be mixed or used in the construction of a structure or unit of a structure without written permission from the Engineer.

The Contractor shall provide suitable means for storing and protecting the fly ash from dampness. Separate storage silos, bins, or containers shall be provided for fly ash. Fly ash which has become partially set or contains lumps of caked fly ash shall not be used.

The temperature of the bulk fly ash shall not be greater than 165°F at the time of incorporation into the work.

All classes of fly ash shall meet the supplementary option chemical requirement for available alkalis listed in AASHTO Designation: M 295, Table 2. Class F fly ash shall have a calcium oxide (CaO) content of less than 6.0%. Class C fly ash shall have a CaO content of greater than or equal to 8.0%.

The replacement of Portland cement with fly ash shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

In addition to these requirements, fly ash shall meet the following specific requirements for the intended use.

907-714.05.2--Fly Ash for Use in Concrete. When used with Portland cement in the production of concrete or grout, the fly ash shall meet the requirements of AASHTO Designation: M 295, Class C or F, with the following exception:

The loss on ignition shall not exceed 6.0 percent.

No additional cementitious materials, such as blended hydraulic cement, GGBFS, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with fly ash.

907-714.06--Ground Granulated Blast Furnace Slag (GGBFS). Delete Subsection 714.06.1 on page 681, and substitute the following.

907-714.06.1--General. The GGBFS source must be approved for listing in the Department's "Approved Sources of Materials" prior to use. The acceptance of GGBFS shall be based on certified test reports, certification of shipment from the supplier, and tests performed on samples obtained after delivery in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual and Department SOP.

The Contractor shall provide suitable means for storing and protecting the GGBFS against dampness and contamination. Separate storage silos, bins, or containers shall be provided for GGBFS. GGBFS which has become partially set, caked or contains lumps shall not be used.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing or other additions made to the GGBFS during production.

GGBFS from different mills shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer; except that this requirement will not be applicable to cement treatment of design soils or bases.

No additional cementitious materials, such as blended hydraulic cement, fly ash, metakaolin, or others, shall be added to or as a replacement for Portland cement when used with GGBFS in the production of concrete. The replacement of Portland cement with GGBFS shall be in accordance with the applicable replacement content specified in Subsection 907-701.02.2.

Delete Subsection 714.07 on page 682, and substitute the following.

907-714.07--Additional Cementitious Materials.

907-714.07.1--Metakaolin.

907-714.07.1.1--General. Metakaolin shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Metakaolin from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with metakaolin in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the metakaolin during production.

907-714.07.1.2--Source Approval. The approval of each metakaolin source shall be on a case

by case basis as determined by the State Materials Engineer. In order to obtain approval of a metakaolin source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the metakaolin meets all the requirements of AASHTO Designation: M295, including the Effectiveness in contributing to sulfate resistance, Procedure A, listed in AASHTO Designation: M295, Table 4 for Supplementary Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of metakaolin from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed metakaolin shall be incorporated at the rate of 10% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.1.3--Storage. The Contractor shall provide suitable means for storing and protecting the metakaolin against dampness and contamination. Metakaolin which has become partially set, caked, or contains lumps shall not be used.

907-714.07.1.4--Specific Requirements. Metakaolin shall meet the requirements of AASHTO Designation: M 295, Class N with the following modifications:

1. The sum of $SiO_2 + Al_2O_3 + Fe_2O_3$ shall be at least 85%. The Material Safety Data Sheet shall indicate that the amount of crystalline silica, as measured by National Institute of Occupation Safety and Health (NIOSH) 7500 method, after removal of the mica interference, is less than 1.0%.
2. The loss on ignition shall be less than 3.0%.
3. The available alkalies, as equivalent Na_2O , shall not exceed 1.0%.
4. The amount of material retained on a No. 325 mesh sieve shall not exceed 1.0%.
5. The strength activity index at seven (7) days shall be at least 85%.

907-714.07.1.5--Acceptance. With each new lot of material shipped the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the requirements AASHTO Designation: M295, Class N and the requirements of this Subsection.

The Department reserves the right to sample, for check tests, any shipment or lot of metakaolin delivered to a project.

907-714.07.2--Silica Fume.

907-714.07.2.1--General. Silica fume shall only be used as a supplementary cementitious material in Portland cement concrete for compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. Silica fume from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. No additional cementitious materials, such as blended hydraulic cement, performance hydraulic cement, fly ash, GGBFS, or others, shall be added to or as a replacement for Portland cement when used with silica fume in the production of concrete.

The State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the silica fume during production.

907-714.07.2.2--Source Approval. The approval of each silica fume source shall be on a case by case basis as determined by the State Materials Engineer. In order to obtain approval of a silica fume source, the Producer/Suppliers shall submit to the State Materials Engineer the following for review: certified test reports, made by an acceptable, independent laboratory regularly inspected by the Cement and Concrete Reference Laboratory of the National Institutes of Standards and Technology, which show that the silica fume meets all the requirements of AASHTO Designation: M307, Table 3, including the Sulfate resistance expansion, listed in the table for Optional Physical Requirements, and other requirements listed herein.

In order to demonstrate effectiveness in contributing to sulfate resistance, included in this test data shall be results of silica fume from the proposed source tested in accordance with ASTM Designation: C 1012. There shall be two sets of test specimens per the following:

- a. One set of test specimens shall be prepared using a Type I Portland cement meeting the requirements of AASHTO Designation: M85 and having a tricalcium aluminate (C_3A) content of more than 8.0%,
- b. One set of test specimens shall be prepared using a Type II Portland cement meeting the requirements of AASHTO Designation: M85.
- c. The proposed silica fume shall be incorporated at the rate of 8% cement replacement in each set of test specimens and shall meet both of the acceptance criteria listed below for source approval.

The requirement for acceptance of the test sample using Type I Portland cement is an expansion of 0.10% or less at the end of six months. The requirement for acceptance of the test sample using Type II Portland cement is an expansion of 0.05% or less at the end of six months.

907-714.07.2.3--Storage. The Contractor shall provide suitable means for storing and protecting the silica fume against dampness and contamination. Silica fume which has become partially set, caked, or contains lumps shall not be used.

907-714.07.2.4--Acceptance. With each new lot of material shipped, the Contractor shall submit to the State Materials Engineer a certified test report from the manufacturer showing that the material meets the Chemical and Physical Requirements of AASHTO Designation: M307.

The Department reserves the right to sample, for check tests, any shipment or lot of silica fume delivered to a project.

Delete Subsection 714.11.6 on pages 690 and 691, and substitute the following.

907-714.11.6--Rapid Setting Cementitious Patching Compounds for Concrete Repair. Rapid setting concrete patching compounds must be approved for listing in the Department's "Approved Sources of Materials" prior to use. Upon approval, a product must be recertified every four (4) years to remain on the "Approved Sources of Materials" list. Each product shall be pre-measured and packaged dry by the manufacturer. All liquid solutions included by the manufacturer as components of the packaged material shall be packaged in a watertight container. The manufacturer may include aggregates in the packaged material or recommend the addition of Contractor furnished aggregates.

The type, size and quantity of aggregates, if any, to be added at the job site shall be in accordance with the manufacturer's recommendations and shall meet the requirements of Subsection 703.02 for fine aggregate and Subsection 703.03 for coarse aggregate. Required mixing water to be added at the job site shall meet the requirements of Subsection 714.01.2.

Only those bonding agents, if any, recommended by the manufacturer of the grout or patching compounds may be used for increasing the bond to old concrete or mortar surfaces.

Patching compounds containing soluble chlorides will not be permitted when in contact with steel.

Site preparation, proportioning of materials, mixing, placing and curing shall be performed in accordance with the manufacturer's recommendation for the specific type of application, and the Contractor shall furnish a copy of these recommendations to the Engineer.

Rapid setting cementitious concrete patching compounds, including components to be added at the job site, shall conform to the following physical requirements:

Non-shrink cementitious grouts shall not be permitted for use.

Compressive strength shall equal or exceed 3000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

Bond strength shall equal or exceed 1000 psi in 24 hours in accordance with ASTM C 928 for Type R2 concrete or mortar.

The material shall have a maximum length change of $\pm 0.15\%$ in accordance with ASTM C 928 for Type R2 concrete or mortar.

The Contractor shall furnish to the Engineer three copies of the manufacturer's certified test report(s) showing results of all required tests and certification that the material meets the specifications when mixed and placed in accordance with the manufacturer's instructions. When the mixture is to be placed in contact with steel, the certification shall further state that the packaged material contains no chlorides. Certified test report(s) and certification shall be furnished for each lot in a shipment.

The proportioning of materials must be approved by the State Materials Engineer and any subsequent change in proportioning must also be approved. A sample of each component shall be submitted to the Engineer along with the quantity or percentage of each to be blended. At least 45 days must be allowed for initial approval.

The proportioning of materials for subsequent lots may be approved by the State Materials Engineer upon receipt of certification from the manufacturer that the new lot of material is the same composition as that originally approved by the Department and that the material has not been changed or altered in any way.

907-714.11.7--Commercial Grout for Anchoring Doweled Tie Bars in Concrete. Before Subsection 714.11.7.1 on page 691, add the following.

Approved Non-“Fast Set” Epoxy anchor systems as specified below may be used for the repair of concrete pavements that do not involve permanent sustained tension applications or overhead applications.

“***Fast Set Epoxy***” may not be used for any Adhesive Anchor Applications. Adhesive Anchor Systems (Fast Set epoxy or otherwise) shall not be used for permanent sustained tension applications or overhead applications. “Fast Set Epoxy” refers to an epoxy produced by the Sika Corporation called Sikadur AnchorFix-3 and repackaged for sale under a variety of names/companies listed at the Federal Highway Administration web site at the following link:

<http://www.fhwa.dot.gov/Bridge/adhesives.cfm>

907-714.11.7.4--Acceptance Procedure. After the last sentence of the first paragraph of Subsection 714.11.4 on page 691, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the “Approved Sources of Materials” list.

907-714.11.8--Epoxy Joint Repair System.

907-714.11.8.1--General. After the last sentence of the first paragraph of Subsection 714.11.8.1 on page 692, add the following.

Upon approval, a product must be recertified every four (4) years to remain on the “Approved Sources of Materials” list.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-715-4

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Roadside Development Materials

Section 715, Roadside Development Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-715.02.2.1--Agricultural Limestone. Delete the first sentence of Subsection 715-02.2.1 on page 704 and substitute the following.

Agricultural limestone shall be either a hard-rock limestone material or a marl or chalk agricultural liming material as addressed in the latest amendment to the Mississippi Agricultural Liming Material Act of 1993, published by the Mississippi Department of Agriculture and Commerce.

907-715.02.2.1.1--Screening Requirements. Delete the first sentence of Subsection 715.02.2.1.1 on page 704.

Delete Subsection 715.02.2.1.2 on page 704 and substitute the following.

907-715.02.2.1.2--Calcium Carbonate Equivalent. Marl or chalk liming material shall not have less than 70% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry weight basis.

907-715.02.2.1.3--Neutralizing Values. Hard-rock limestone material shall have a minimum Relative Neutralizing Value (RNV) of 63.0%, which is determined as follows.

$$\% \text{ RNV} = \text{CCE} \times (\% \text{ passing \#10 mesh} + \% \text{ passing \#50 mesh}) / 2$$

Where: CCE = Calcium Carbonate Equivalent

907-715.03--Seed.

907-715.03.2--Germination and Purity Requirements. Add the following to Table B on page 705.

Name (Kind)	Name (Variety)	Percent Germination	Percent Purity
GRASSES			
Rye Grass	Annual	80	98
Wheat	-	80	98

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-720-2

CODE: (IS)

| DATE: 05/01/2013

| SUBJECT: Pavement Marking Materials

Section 720, Pavement Marking Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

| **907-720.01--Glass Beads.** After the first sentence of Subsection 720.01 on page 729, add the following.

The glass beads shall contain no more than 200 ppm (mg/kg) total concentration for lead, arsenic, or antimony. The manufacture shall furnish the Engineer with a certified test report indicating that the glass beads meet the above requirement.

907-720.02--Thermoplastic Pavement Markings. Delete the first paragraph of Subsection 720.02 on page 730 and substitute the following.

The thermoplastic material shall be lead free and conform to AASHTO Designation: M 249 except the glass beads shall be moisture resistant coated.

After the first sentence of the second paragraph of Subsection 720.02 on page 730, add the following.

In addition, the certification for the thermoplastic material shall state that the material is lead free.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-804-19

DATE: 03/22/2016

SUBJECT: Concrete Bridges and Structures

Delete the second and third paragraphs of Subsection 907.804.03.16.2 on page 37, and substitute the following.

For bridge decks when the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods. Additionally, when the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-19

CODE: (SP)

DATE: 11/10/2015

SUBJECT: Concrete Bridges and Structures

Section 804, Concrete Bridges and Structures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby deleted and replaced as follows.

SECTION 907-804--CONCRETE BRIDGES AND STRUCTURES

907-804.01--Description. This work consists of constructing concrete bridges and structures in accordance with these specifications and in reasonably close conformity with the dimensions, designs, lines, and grades indicated on the plans or established.

Construction of box bridges shall be in accordance with Sections 601 and 602.

907-804.02--Materials.

907-804.02.1--General. Concrete produced and controlled from this specification shall be accepted upon proper certification of concrete production through an approved quality control program and verification by job site acceptance criteria. The Contractor shall develop and implement a quality control program which shall be used to maintain the required properties of concrete. For projects with 1000 cubic yards and more, quality control and acceptance shall be achieved through statistical evaluation of test results. For projects of more than 200 but less than 1000 cubic yards, quality control and acceptance shall be achieved by individual test results. For projects less than or equal to 200 cubic yards, refer to the requirements of TMD-20-05-00-000 "Sampling and Testing of Small Quantities of Miscellaneous Materials" for mixture design and testing requirements.

The materials for concrete bridges and structures, when sampled and tested in accordance with Subsection 700.03, shall meet the requirements of the following Subsections:

Portland Cement	701.01 and 701.02
Blended Cement	907-701.01 and 907-701.04
Admixtures	713.02
Fly Ash	714.05
Ground Granulated Blast Furnace Slag (GGBFS)	907-714.06
Silica Fume	907-714.07.2
Water	714.01.1 and 714.01.2
Fine Aggregate	703.02
Coarse Aggregate	703.03
Lightweight Aggregate	907-703.19
Curing Materials	713.01

Joint Materials	707.01, 707.02, and 707.07
Structural Steel Joints and Bearing Devices	717.01
Bearing Pads	714.10
Wire Rope or Wire Cable for Prestressed Concrete	700.01 and 711.03
Sprayed Finish for Concrete Surface	714.12
Reinforcing Steel	711.02

907-804.02.2--Use, Care, and Handling. The use, care, and handling of materials shall conform to the applicable requirements of Subsection 501.03.10 and the specific requirements of Subsections 907-804.02.4 and 907-804.02.5. Unless otherwise authorized, only fine aggregate or coarse aggregate of one type and from the same source shall be used in the construction of any one unit of a structure. Should the Contractor, with written permission of the Engineer, elect to substitute high early strength cement for cement of the type specified, the Contractor will not receive additional compensation for the substitution.

907-804.02.3--Blank.

907-804.02.4--Care and Storage of Concrete Aggregates. The handling and storage of aggregates shall be such as to prevent segregation or contamination with foreign materials. The Engineer may require that aggregates be stored on separate platforms at satisfactory locations.

When specified, coarse aggregates shall be separated into two or more sizes in order to secure greater uniformity of the concrete mixture. Different sizes of aggregate shall be stored in separate stock piles sufficiently removed from each other to prevent the material at the edges of the piles from becoming intermixed.

907-804.02.5--Storage of Cementitious Materials. All cementitious materials shall be stored in suitable weather-proof buildings or bins. These buildings or bins shall be placed in locations approved by the Engineer. Provision for storage shall be ample, and the shipments of cementitious materials as received shall be stored separately or other provisions made to the satisfaction of the Engineer for easy access for the identification, inspection, and sampling of each shipment as deemed desirable. Stored cementitious materials shall meet the test requirements at any time after storage when a retest is ordered by the Engineer.

On small jobs, open storage consisting of a raised platform and ample waterproof covering may be permitted by written authorization from the Engineer.

When specified, the Contractor shall keep accurate records of deliveries of cementitious materials and of their use in the work. Copies of these records shall be supplied in the form required by the Engineer.

907-804.02.6--Classification and Uses of Concrete. When a specific class of concrete is not specified on the plans or in the contract documents, the structure or parts thereof shall be constructed with the class of concrete as directed by the Engineer.

The classes and their uses are as follows:

- (1) Class AA - Concrete for bridge construction and concrete exposed to seawater.
- (2) Class A - Concrete shown as Class A shall herein be classified as and required to meet the performance criteria of Class AA.
- (3) Class B - General use, heavily reinforced sections, cast-in-place concrete piles, and conventional concrete piles.
- (4) Class C - Massive sections or lightly reinforced sections.
- (5) Class D - Massive unreinforced sections and riprap.
- (6) Class F - Concrete for prestressed members.
- (7) Class FX - Extra strength concrete for prestressed members, as shown on plans.
- (8) Class S - For all seal concrete deposited under water.
- (9) Class DS - Drilled Shaft

907-804.02.7--Blank.

907-804.02.8--Laboratory Accreditation. The Contractor shall be responsible for furnishing the laboratory used to perform concrete quality control tests. The laboratory may be the Contractor's facility, the concrete producer's facility, or a certified independent testing laboratory.

Only laboratories certified by the Mississippi Department of Transportation are qualified to perform material testing. Certification by AASHTO Accreditation Program (AAP) will be acceptable if the laboratory is listed in the latest AAP publication and maintains accreditation to completion of concrete work.

The Contractor's laboratory designated for quality control testing shall have equipment necessary to test aggregates and concrete for the test methods listed in Table 1.

Table 1

AASHTO: R 39	Making and Curing Concrete Test Specimens in the Laboratory
AASHTO: R 60	Sampling Freshly Mixed Concrete
AASHTO: T 2	Sampling Aggregates
AASHTO: T 19	Bulk Density ("Unit Weight") and Voids in Aggregates
AASHTO: T 22	Compressive Strength of Cylindrical Concrete Specimens
AASHTO: T 23	Making and Curing Concrete Test Specimens in the Field
AASHTO: T 27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO: T 84	Specific Gravity and Absorption of Fine Aggregate
AASHTO: T 85	Specific Gravity and Absorption of Coarse Aggregate
AASHTO: T 119	Slump of Hydraulic Cement Concrete
AASHTO: T 121	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
AASHTO: T 152	Air Content of Freshly Mixed Concrete by Pressure Method *
AASHTO: T 196	Air Content of Freshly Mixed Concrete by the Volumetric Method *
AASHTO: T 231	Capping Cylindrical Concrete Specimens
AASHTO: T 248	Reducing Field Samples of Aggregate to Testing Size
AASHTO: T 255	Total Evaporable Moisture Content of Aggregate by Drying

AASHTO: T 325	Standard Method of Test for Estimating the Strength of Concrete in Transportation Construction by Maturity Tests **
ASTM: C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete
ASTM: C 1074	Standard Practice for Estimating Concrete Strength by the Maturity Method **

* Equipment necessary for either pressure or volumetric air content.

** Equipment necessary for estimating concrete strength following the maturity method.

Testing equipment shall have been inspected by the Department or through the AASHTO Accreditation Program. Testing equipment calibration files shall be made available upon request by the Department.

907-804.02.9--Testing Personnel. Technicians testing portland cement concrete, for either acceptance or production control purposes, shall be certified by an accepted certification program. Recertification is required for each Class after five years. Certification requirements are listed in Table 2.

Table 2

Concrete Technician's Tasks	Test Method Required	Certification Required**
Sampling or Testing of Plastic Concrete	AASHTO Designation: R 60, T 23, T 119, T 121, T 152, T 196, and ASTM Designation: C 1064	MDOT Class I certification
Compressive Strength Testing of Concrete Cylinders	AASHTO Designation: T 22 and T 231	MDOT Concrete Strength Testing Technician certification
Sampling of Aggregates	AASHTO Designation: T 2	Work under the supervision of a MDOT Class II certified technician
Testing of Aggregates	AASHTO Designation: T 19, T 27, T 84, T 85, T 248, and T 255	MDOT Class II certification
Proportioning of Concrete Mixtures*	AASHTO Designation: M 157 and R 39	MDOT Class III certification
Interpretation and Application of Maturity Meter Readings	AASHTO Designation: T 325 and ASTM Designation: C 1074	MDOT Class III certification or Two hours maturity method training

* Technicians making concrete test specimens for meeting the requirements of Subsection 907-804.02.10.1.2 shall be MDOT Class I certified and under the direct supervision of an MDOT Class III certified technician.

** MDOT Class I certification encompasses the same test procedures and specifications as ACI Concrete Field Testing Technician-Grade I. MDOT Class II certification encompasses the same test procedures and specifications as ACI Aggregate Testing Technician-Level 1. MDOT Concrete Strength Testing Technician encompasses the same test procedures and specifications as ACI Concrete Strength Testing certification.

Specific requirements for each level of certification are in the latest edition of the Department's *Concrete Field Manual*. Current MDOT Class I, MDOT Class II, and/or MDOT Class III certifications shall be acceptable until those certifications expire. Upon expiration of a current certification, recertification with the certifications listed in Table 2 shall be required. Technicians performing either specific gravity testing of aggregates or compressive strength tests shall be required to either:

- have the required MDOT certification listed in Table 2, or
- have a current MDOT Class III certification or work under the direct supervision of current MDOT Class III technician, and have demonstrated the specific gravity and/or compressive strength test during the inspection of laboratory equipment by the Materials Division, Concrete Section.

907-804.02.10--Portland Cement Concrete Mixture Design. At least 10 days prior to production of concrete, the Contractor shall submit to the Engineer proposed concrete mixture designs complying with the Department's *Concrete Field Manual*. Materials shall be from approved sources meeting the requirements of the Standard Specifications. Proportions for the mixture designs shall be for the class concrete required by the contract plans and shall meet the requirements of the "Master Proportion Table for Structural Concrete Design" listed in Table 3. The concrete producer shall assign a permanent unique mixture number to each mixture design. Each mixture design shall be field verified as required in Subsection 907-804.02.10.3. Acceptable field verification data shall be required for final approval of a mixture design.

All concrete mixture designs will be reviewed by the Materials Division prior to use. Concrete mixture designs disapproved will be returned to the Contractor with a statement explaining the disapproval.

If the Contractor chooses to cure the concrete in accordance with the requirements listed under **Length of Time Defined by Development of Compressive Strength** in Subsection 907-804.03.17, the compressive strength/maturity relationship shall be developed for the mixture design for a minimum of 28 days following the requirements of Subsection 907-804.03.15. The compressive strength/maturity relationship information shall be submitted with the mixture design information.

Table 3
MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN

Class	Coarse Aggregate Size No.*	Maximum Water/Cementitious** Ratio	Specified Compressive Strength (f'_c) psi	Maximum Permitted Slump*** inches	Nominal Total Air Content**** %
AA*****	57 or 67	0.45**	4000	3***	4.5*****
B	57 or 67	0.50	3500	4	4.5
C	57 or 67	0.55	3000	4	4.5
D	57 or 67	0.70	2000	4	4.5
F	67	0.40	5000	3	*****
FX	67	(As per mixture design)	(As shown on plans)	3	*****
S	57 or 67	0.45	3000	8	4.5
DS	67	0.45	4000	***	*****

* Maximum size aggregate shall conform to the concrete mixture design for the specified aggregate. Other smaller coarse aggregate sizes meeting the requirements of Subsection 907-703.03.2.4 may also be used in conjunction with the coarse aggregate sizes listed. Lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 may also be used as a partial replacement for fine aggregate.

** The replacement limits of portland cement by weight by other cementitious materials (such as fly ash, GGBFS, silica fume, or others) shall be in accordance with the values in Subsection 907-701.02. Other hydraulic cements may be used in accordance with the specifications listed in Section 701.

For Class AA concrete for concrete bridge decks, the water / cementitious ratio range shall be 0.43 – 0.45 and the maximum cementitious material content shall be 550 pounds per cubic yard. The “maximum cementitious material content” refers to the total weight of Portland cement, blended hydraulic cement, GGBFS, silica fume, and fly ash.

*** Unless otherwise specified, minus slump requirements shall meet those set forth in Table 3 of AASHTO Designation: M157.

For Class AA concrete for concrete bridge decks the maximum permitted slump may be increased to five (5) inches. Also, for each additional pound of fibers per cubic yard added in excess of the requirement in Note ***** , an additional inch of slump will be allowed up to a maximum permitted slump of eight (8) inches.

For Class AA not used in bridge decks and all other Classes of concrete, the maximum permitted slump may be increased to eight (8) inches.

For Class DS concrete for drilled shafts the slump range shall be 8 inches $\pm$ 1 inch.

***** The tolerance on total air content shall be $\pm 1.5\%$. For Class AA concrete for concrete bridge decks, the nominal total air content may be increased to 6.5%.

***** For Class AA concrete for concrete bridge decks, an approved synthetic structural fiber meeting the requirements of Special Provision 907-711, Synthetic Structural Fiber Reinforcement, shall be incorporated into the mixture at 1.25 times the approved dosage rate.

***** Entrained air is not required except for concrete exposed to seawater. For concrete not exposed to seawater, the total air content shall not exceed 6.0%. For concrete exposed to seawater, the nominal total air content shall be 4.5%.

At least one water-reducing admixture or water-reducing/set-retarding admixture shall be used in all classes of concrete in accordance with the manufacturer's recommended dosage range. Admixtures providing a specific performance characteristic other than those of water reduction or set retardation may be used in accordance with the manufacturer's recommended dosage range. Mixture designs containing accelerating admixtures will not be approved. Any combinations of admixtures shall be approved by the Engineer before their use.

907-804.02.10.1--Proportioning of Portland Cement Concrete Mixture Design. Proportioning of portland cement concrete shall be based on an existing mixture of which the producer has field experience and documentation or based on a recently batched laboratory mixture tested according to the required specifications.

907-804.02.10.1.1--Proportioning on the Basis of Previous Field Experience of Trial Mixtures. Where a concrete production facility has a record, based on at least 10 consecutive strength tests from at least 10 different batches within the past 12 months from a mixture not previously used on Department projects, the standard deviation shall be calculated. The record of tests from which the standard deviation is calculated shall:

- a) Represent similar materials and conditions to those expected. Changes in materials and proportions within the test record shall not have been more closely restricted than those for the proposed work.
- b) Represent concrete produced to meet a specified strength.
- c) Consist of 10 consecutive tests, average of two cylinders per test, tested at 28 days.

The standard deviation, s , shall be calculated as:

$$s = \left[\sum (X_i - \bar{X})^2 \div (N - 1) \right]^{1/2}$$

where:

X_i = the strength result of an individual test

$\bar{X}$ = the average of individual tests in the series

N = number of tests in the series

When the concrete production facility does not have a record of tests for calculation of standard deviation, as required in the above formula, the requirements of Subsection 907-804.02.10.1.2 shall govern.

The required average compressive strength (f'_{cr}) used as the basis for selection of concrete proportions shall conform to the inequality listed below, while using a standard deviation, s , calculated as shown above.

$$\bar{X} \geq f'_{cr}$$

where:

$$f'_{cr} = f'_c + 1.43s$$

where:

f'_c = specified compressive strength of concrete, psi

f'_{cr} = required average compressive strength of concrete, psi

s = standard deviation, psi

1.43 represents the Lower Quality Index necessary to assure that 93% of compressive strength tests are above f'_c .

907-804.02.10.1.2--Proportioning on the Basis of Laboratory Trial Mixtures. When an acceptable record of field test results is not available, concrete proportions shall be established based on laboratory trial mixtures meeting the following restrictions:

- a) The combination of materials shall be those intended for use in the proposed work.
- b) Trial mixtures having proportions and consistencies suitable for the proposed work shall be made using the ACI 211.1 as a guide to proportion the mixture design.
- c) Trial mixtures shall be designed to produce a slump within $\pm 3/4$ inch of the maximum permitted, and for air-entrained concrete, ± 0.5 percent of the maximum total air content. The temperature of freshly mixed concrete in trial mixtures shall be reported.
- d) For each proposed mixture, at least three compressive test cylinders shall be made and cured in accordance with AASHTO Designation: R 39. Each change of water-cement ratio shall be considered a new mixture. The cylinders shall be tested for strength in accordance with AASHTO Designation: T 22 and shall be tested at 28 days.
- e) The required average strength of laboratory trial mixes shall exceed f'_c by 1200 psi for concrete mixture designs less than 5000 psi and by 1400 psi for concrete mixture designs of 5000 psi or more.

- f) The laboratory trial batch mixtures shall have been made within the previous 12 months before being submitted for approval and shall not have been previously used on Department projects.

907-804.02.10.2--Documentation of Average Strength. Documentation that the proposed concrete proportions will produce an average strength equal to or greater than the required average shall consist of the strength test records from field tests or results from laboratory trial mixtures.

907-804.02.10.3--Field Verification of Concrete Mixture Design. Concrete mixture designs will only be tentatively approved pending field verification. The requirements for yield, slump, or total air content shall be successfully met within the first three (3) production days. Mixture designs may be transferred to other projects without additional field verification testing, once the mixture design has passed the field verification process.

The Contractor's Certified Quality Control Technicians shall test each concrete mixture design upon the first placement of the mix. Aggregates and concrete tests during the first placement shall be as follows.

<u>Aggregates</u>	<u>Concrete</u>
Bulk Specific Gravity	Water Content
Moisture	Slump
Gradation	Air Content
	Unit Weight
	Yield

For all Classes of concrete, the mixture shall be verified to yield within 2.0% of the correct volume when all the mix water is added to the batch.

For all Classes of concrete other than DS, F, and FX, the mixture shall produce a slump within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"), and producing a total air content within a minus 1½ percent tolerance of the maximum allowable air content in Table 3.

For Class DS, the slump shall be within the requirements in Note *** below Table 3. For Class DS exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in Note ***** below Table 3. For Class DS not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

For Classes F and FX, the slump shall be within a minus 1½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of three inches (3") or less or within a minus 2½-inch tolerance of the maximum permitted for mixtures with a maximum permitted slump of greater than three inches (3"). For Classes F and FX exposed to seawater, the total air content shall be within a minus 1½ percent tolerance of the maximum allowable air content in

Note ***** below Table 3. For Classes F and FX not exposed to seawater the total air content shall be within the requirements in Note ***** below Table 3.

The mixture shall be adjusted and retested, if necessary, on subsequent placements until the above mentioned properties are met.

If the requirements for yield, slump, or total air content are not met within the first three (3) production days, subsequent field verification testing shall not be permitted on Department projects, and the mixture design shall not be used until the requirements listed above are met. Any mixture design adjustments, changes in the mixture proportions, are to be made by a Class III Certified Technician representing the Contractor. After the mixture design has been verified and adjustments made, verification test results will be reviewed by the Engineer.

907-804.02.10.3.1--Slump Retention of Class DS Concrete Mixture Designs. Prior to concrete placement, the Contractor shall provide test results of a slump loss test using approved methods to demonstrate that the mixture meets the four hour requirement in Subsection 907-803.02.7.1. These tests shall be conducted successfully by an approved testing laboratory within 30 days prior to installation of the trial shaft, with personnel from the Materials Division present. The slump loss test shall be conducted at temperatures and conditions similar to those expected at the job site at the time of the installation of the trial shaft. The sample for the slump loss test shall be from a minimum batch size of four (4) cubic yards of concrete. If the time between the previous successful slump loss test and the installation of the trial shaft exceeds 30 days, another successful slump loss test shall be performed on the first truckload of concrete as part of the installation of the trial shaft. This requirement limiting the time between the previous slump loss test and an installation of the trial shaft also applies to Class DS concrete mixture designs being transferred from another project. During any shaft installation a slump loss test shall be conducted by the Contractor at the direction of the Engineer from the concrete at the site for verification of slump loss requirements using a sample from a minimum batch size of four cubic yards of concrete.

907-804.02.10.4--Adjustments of Mixtures. The mixture design may be adjusted by the Class III Certified Technician representing the Contractor in accordance with the allowable revisions listed in the Department's *Concrete Field Manual*, paragraph 5.7. Written notification shall be submitted to the Engineer a minimum of seven (7) days prior to any source or brand of material change, aggregate size change, allowable material type change, or decrease in any cementitious material content. Any adjustments of the concrete mixture design shall necessitate repeat of field verification procedure as described in Subsection 907-804.02.10.3 and approval by the Engineer.

907-804.02.11--Concrete Batch Plants. The concrete batch plant shall meet the requirements of the National Ready Mixed Concrete Association *Quality Control Manual, Section 3, Plant Certification Checklist* as outlined in the latest edition of the Department's *Concrete Field Manual*. The Contractor shall submit a copy of the approved checklist along with proof of calibration of batching equipment, i.e., scales, water meter, and admixture dispenser, to the Engineer 30 days prior to the production of concrete.

For projects with 1000 cubic yards and more, the concrete batch plant shall meet the requirements for an automatic system capable of recording batch weights. It shall also have automatic moisture

compensation for the fine aggregate. For projects of more than 200 but less than 1000 cubic yards the plant can be equipped for manual batching with a fine aggregate moisture meter visible to the plant operator.

The concrete batch plant shall have available adequate facilities to cool concrete during hot weather.

Mixer trucks to be used on the project are to be listed in the checklist and shall meet the requirements of the checklist.

907-804.02.12--Contractor's Quality Control. The Contractor shall provide and maintain a quality control program that will provide reasonable assurance that all materials and products submitted to the Department for acceptance will conform to the contract requirements, whether manufactured or processed by the Contractor or procured from suppliers, subcontractors, or vendors.

The Contractor's Quality Control program shall implement the minimum quality control requirements shown in Table 4, "CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL". The quality control activities shown in the table are considered to be normal activities necessary to control the production and placing of a given product or material at an acceptable quality level. To facilitate the Department's activities, all completed gradation samples shall be retained for a maximum of sixty (60) days by the Contractor until further disposition is designated by the Department.

The Contractor shall perform, or have performed, the tests required to substantiate product conformance to contract document requirements and shall also perform, or have performed, all tests otherwise required.

The Contractor's Quality Control program shall encompass the requirements of AASHTO Designation: M 157 into concrete production and control, equipment requirements, testing, and batch ticket information. The requirement of AASHTO Designation: M 157, Section 11.7 shall be followed except, on arrival to the job site, a maximum of 1½ gallons per cubic yard shall be allowed to be added. Water shall not be added at a later time. Job site adjustment of a batch using chemical admixtures or the mechanical adjustment of a batch may be performed by the Contractor if the requirements of Subsection 907-804.02.12.1.1 have been satisfactorily addressed in the Quality Control Plan. If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

The Contractor's quality control tests shall be documented and shall be available for review by the Engineer throughout the life of the contract.

As set out in these specifications, quality control sampling and testing performed by the Contractor will be used by the Department for determination of acceptability of the concrete.

The Contractor shall maintain standard equipment and qualified personnel as required to assure conformance to contract requirements.

907-804.02.12.1--Quality Control Plan. The Contractor shall prepare a Quality Control Plan which shall identify the personnel responsible for the Contractor's quality control including the company official who will act as liaison with Department personnel. The Quality Control Plan shall be submitted in writing to the Engineer for approval 30 days prior to the production of concrete.

The class(es) of concrete involved will be listed separately. If an existing mixture design(s) is to be used, the mixture design number(s) as previously approved shall be listed.

It is intended that sampling and testing be in accordance with standard methods and procedures, and that measuring and testing equipment be standard and properly calibrated. If alternative sampling methods and procedures, and inspection equipment are to be used, they shall be detailed in the Quality Control Plan.

907-804.02.12.1.1--Elements of Plan. The Plan shall address all elements that affect the quality of the structural concrete including, but not limited to, the following items:

- 1) Stockpile Management
- 2) Procedures for Corrective Actions for Non Compliance of Specifications
- 3) Procedure for Controlling Concrete Temperatures
- 4) Job Site Batch Adjustments by Addition of Chemical Admixtures:

The Plan shall address if the Contractor intends to adjust either the slump and/or total air content of a batch on the job site by adding chemical admixture(s) to a batch. The Contractor shall include the names of the personnel designated to perform this batch adjustment, the equipment used to add the chemical admixture(s), and the procedure by which the batch adjustment will be accomplished. Only the Contractor's designated personnel shall adjust a batch. Only calibrated dispensing equipment shall be used to add chemical admixture(s) to a batch. Only the procedure described in this section of the Plan shall be utilized.

If either the maximum permitted slump is exceeded or the total air content is not within the required range after all adjustments are made at the job site, the concrete shall be rejected.

If the Contractor elects to utilize Job Site Batch Adjustments by Addition of Chemical Admixture within Item 2, Procedures for Corrective Actions for Non Compliance of Specifications, to adjust batches which do not meet the minimum specification requirements for slump and/or total air content, no more than three batches on any one project shall be allowed to be adjusted regardless of the number of mixtures associated with the project.

- 5) Construction of Concrete Bridge Decks, including the following:

- the description of the equipment used for placing concrete on the bridge deck in accordance with Subsection 907-804.03.6 and, as applicable, Subsections 907-804.03.7 and 907-804.03.8 including any accessories added to the pump to ensure the entrained air in the concrete mixture remains entrained during pumping and depositing of the concrete mixture,
- the description of and the number of pieces of equipment used to consolidate the concrete in accordance with Subsection 907-804.03.6.2,
- the description of the equipment used to finish the bridge deck in accordance with Subsection 907-804.03.19.7,
- the plan for ensuring a continuous rate of finishing the bridge deck without delaying the application of curing materials within the time specified in Subsection 907-804.03.17, including ensuring a continuous supply of concrete throughout the placement with an adequate quantity of concrete to complete the deck and filling diaphragms and end walls in advance of deck placement,
- the plan for applying the curing materials within the time specified in Subsection 907-804.03.17,
- the description of the powered fogging equipment in accordance with Subsection 907-804.03.17,
- a sample of the documentation used as the daily inspection report for ensuring maintenance of the continuous wet curing in accordance with Subsection 907-804.03.17, as required,
- the description of the equipment used to apply the liquid membrane, including but not limited to, the nozzles, pumping/pressurization equipment, and liquid membrane tanks, in accordance with Subsection 907-804.03.17,
- the method for determining the rate of applied liquid membrane meets the application rate requirements in accordance with Subsection 907-804.03.17,
- a sample of the documentation used for the application rate verification of the liquid membrane in accordance with Subsection 907-804.03.17.

6) Mechanical Adjustment of Trucks

907-804.02.12.2--Personnel Requirements. The Contractor's Designated Certified Technician shall perform and use quality control tests and other quality control practices to assure that delivered materials and proportioning meet the requirements of the mixture design including temperature, slump, air content, and strength and shall periodically inspect all equipment used in transporting, proportioning, and mixing.

The Contractor's Designated Technician shall periodically inspect all equipment used placing, consolidating, finishing, and curing to assure it is operating properly and that placement, consolidation, finishing, and curing conform to the mixture design and other contract requirements.

907-804.02.12.3--Documentation. The Contractor shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations made, the number and type of deficiencies found, date and time of samples taken, the quantities approved and rejected, and the nature of corrective action taken as appropriate. The Contractor's

documentation procedures will be subject to approval of the Department prior to the start of the work and to compliance checks during the progress of the work.

All conforming and non-conforming results shall be kept complete and shall be available at all times to the Department during the performance of the work. Forms shall be on a computer-acceptable medium. Batch tickets and gradation data shall be documented in accordance with Department requirements.

Batch tickets shall contain all the information in AASHTO Designation: M157, Section 16 including the additional information in Subsection 16.2 with the following exception: the information listed in paragraphs 16.2.7 and 16.2.8 is not required. All material added to a batch by both the batch plant or added manually shall be documented on the ticket. Batch tickets shall also contain the concrete producer's permanent unique mixture number assigned to the concrete mixture design. Copies shall be submitted to the Department as the work progresses.

Test data for portland cement concrete, including gradation, shall be charted in accordance with the applicable requirements.

The Contractor may use additional control charts as deemed appropriate. It is normally expected that testing and charting will be completed within 24 hours after sampling.

All records documenting the Contractor's quality control tests shall become the property of the Department upon completion of the work.

907-804.02.12.4--Corrective Action. The Contractor shall take prompt action to correct conditions that have resulted, or could result, in the submission to the Department of materials and products that do not conform to the requirements of the contract documents. All corrective actions shall be documented.

907-804.02.12.5--Non-Conforming Materials. The Contractor shall establish and maintain an effective and positive system for controlling non-conforming material, including procedures for its identification, isolation and disposition. Reclaiming or reworking of non-conforming materials shall be in accordance with procedures acceptable to the Department.

All non-conforming materials and products shall be positively identified to prevent use, shipment, and intermingling with conforming materials and products. Holding areas, mutually agreeable to the Department and the Contractor, shall be provided by the Contractor.

TABLE 4
CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL

Portland Cement Concrete		
Control Requirement	Frequency	AASHTO/ASTM Designation
A. PLANT AND TRUCKS 1. Mixer Blades 2. Scales a. Tared b. Calibrate c. Check Calibration 3. Gauges & Meters - Plant & Truck a. Calibrate b. Check Calibration 4. Admixture Dispenser a. Calibrate b. Check Operation & Calibration	Monthly Daily Every 6 months Weekly Every 6 months Weekly Every 6 months Daily	
B. AGGREGATES 1. Sampling 2. Fine Aggregate a. Gradation / FM b. Moisture c. Specific Gravity / Absorption 3. Coarse Aggregates a. Gradation b. Moisture c. Specific Gravity / Absorption	250 yd ³ concrete Check meter against test results weekly 2500 yd ³ concrete 250 yd ³ concrete Minimum of once daily or more as needed to control production. Check meter against test results weekly. 2500 yd ³ Concrete	T 2 T 27 T 255 T 84 T 27 T 255 T 85
C. PLASTIC CONCRETE 1. Sampling 2. Air Content 3. Slump 4. Compressive Strength 5. Yield 6. Temperature	First load then one per 50 yd ³ First load then one per 50 yd ³ A minimum of one set (three cylinders) for each 100 yd ³ inclusive and one set for each additional 100 yd ³ or fraction thereof for each class concrete delivered and placed on a calendar day from a single supplier. A test shall be the average of three cylinders. Each 400 yd ³ With each sample	T 141 T 152 or T 196 T 119 T 22, T 23, T 231 T 121 C 1064

907-804.02.13--Quality Assurance Sampling and Testing. Quality Assurance (QA) inspection and testing will be provided by the Department to assure that the Contractor's Quality Control (QC) testing meets the requirements of these specifications.

Acceptance of the material is based on the inspection of the construction, monitoring of the Contractor's QC program, QC and QA test results per Subsection 907-804.02.13.1, and the comparison of the QA test results with the QC test results. The Department may use the results of the Contractor's QC tests as a part of the acceptance procedures instead of the results of QA tests, provided:

- a) The Department's inspection and monitoring activities indicate that the Contractor is following the approved QC program and, respectively,
- b) For aggregates, the results from the Contractor's QC and the Department's QA testing of aggregate gradations compare by both meeting the aggregate type's gradation requirements;
- c) For concrete, the Contractor's QC and Department's QA testing of concrete compressive strengths compare when using the data comparison computer program with an alpha value of 0.01 for projects with 1000 cubic yards and more; or, strength comparisons are within 990 psi for projects of more than 200 but less than 1000 cubic yards.

The minimum frequency for QA testing of aggregate and plastic concrete by the Department will follow the frequencies listed in Table 5, "DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE".

TABLE 5
DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE

Quality Assurance Tests	Frequency	AASHTO/ASTM Designation
A. AGGREGATES		
1. Sampling		T 2
2. Fine Aggregate Gradation and FM	250 yd ³ concrete	T 27
3. Coarse Aggregates Gradation	250 yd ³ concrete	T 27
B. PLASTIC CONCRETE		
1. Sampling		T 141
2. Air Content	Every 100 yd ³	T 152 or T 196
3. Slump	Every 100 yd ³	T 119
4. Compressive Strength	One set (three cylinders) for every 100 yd ³ inclusive. A test shall be the average of three cylinders.	T 22, T 23, T 231
5. Temperature	With each sample	C 1064

Periodic inspection by the Department of the Contractor's QC testing and production will continue through the duration of the project. Weekly reviews will be made of the Contractor's QC records and charts.

For aggregates, comparison of data of the Contractor's QC aggregate gradation test results to those of the Department's QA aggregate gradation test results will be made monthly during concrete

production periods according to Department Standard Operating Procedures. When it is determined that the Contractor's QC test results of aggregate gradations are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the aggregates and the Department's QA testing frequency of aggregates may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC aggregate gradation test results fail to compare to those of the Department's QA aggregate gradation test results, Department testing for aggregate gradations will revert to the frequency shown in Table 5 for aggregates until the Contractor's and Department's aggregate gradation test data compare.

For concrete compressive strength, comparison of data of the Contractor's QC compressive strength test results to those of the Department's QA compressive strength test results will be made monthly during concrete production periods according to Department's *Concrete Field Manual*. When it is determined that the Contractor's QC test results of concrete compressive strengths are comparative to that of the Department's QA test results, then the Department will use the Contractor's QC results as a basis for acceptance of the concrete and the Department's QA testing frequency of concrete compressive strengths may be reduced to a frequency of no less than three QA tests to every 10 QC tests. If the Contractor's QC compressive strength test results fail to compare to those of the Department's QA compressive strength test results, Department testing will revert to the frequency shown in Table 5 for plastic concrete until the Contractor's and Department's compressive strength test data compare.

907-804.02.13.1--Job Control Testing.

907-804.02.13.1.1--Sampling. Sampling of concrete mixture shall be performed in accordance with the latest edition of the Department's *Concrete Field Manual*.

907-804.02.13.1.2--Slump. Slump of plastic concrete shall meet the requirements of Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.3--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.4--Yield. If the yield of the concrete mix design is more than plus or minus three percent ($\pm 3\%$) of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus three percent ($\pm 3\%$). If batching of the proportions of the mixture design varies outside the batching tolerance range of the originally approved proportions by more than the tolerances allowed in Subsection 907-804.02.12, the new proportions shall be field verified per Subsection 907-804.02.10.3.

907-804.02.13.1.5--Temperature. Cold weather concreting shall follow the requirements of Subsection 907-804.03.16.1. Hot weather concreting shall follow the requirements of Subsection

907-804.03.16.2. Concrete with a temperature more than the maximum allowable temperature shall be rejected and not used in Department work.

The maximum acceptance temperature for Class DS concrete mixtures is 95°F.

The maximum acceptance temperature of Class C concrete mixtures is 100°F for mixtures meeting the cement replacement requirements of Subsection 907-701.02.2. For Class C concrete mixtures that do not meet the cement replacement requirements of Subsection 907-701.02.2, the maximum acceptance temperature is 95°F.

The maximum acceptance temperature for all other concrete mixtures meeting the cement replacement requirements of Subsection 907-701.02.2 is 95°F. The maximum acceptance temperature for all other concrete mixtures which do not meet the cement replacement requirements of Subsection 907-701.02.2 is 90°F.

907-804.02.13.1.6--Compressive Strength. Standard cured concrete compressive strength tests shall conform to the specified strength (f'_c) listed in the specifications. Concrete represented by compressive strength test below the specified strength (f'_c) may be removed and replaced by the Contractor. If the Contractor elects not to remove the material, it will be evaluated by the Department as to the adequacy for the use intended. All concrete evaluated as unsatisfactory for the intended use shall be removed and replaced by the Contractor at no additional cost to the Department. For concrete allowed to remain in place, reduction in payment will be as follows:

Projects with 1000 Cubic Yards and More. When the evaluation indicates that the work may remain in place, a statistical analysis will be made of the QC and QA concrete test results. If this statistical analysis indicates at least 93% of the material would be expected to have a compressive strength equal to or greater than the specified strength (f'_c) and 99.87% of the material would be expected to have a compressive strength at least one standard deviation above the allowable design stress (f_c), the work will be accepted. If the statistical analysis indicates that either of the two criteria are not met, the Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c - (f_c + s)} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

s = standard deviation, psi*

f_c = allowable design stress, psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

* Standard deviation used in the above reduction of pay formula shall be calculated from the applicable preceding compressive strengths test results plus the individual compressive strength below f'_c . If below f'_c strengths occur during the project's first ten compressive strength tests, the standard deviation shall be calculated from the first ten compressive strength tests results.

Projects of More Than 200 but Less Than 1000 Cubic Yards. When the evaluation indicates that the work may remain in place, a percent reduction in pay will be assessed based on a comparison of the deficient 28-day test result to the specified strength. The Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c} \times 100 \times M$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

M = pay reduction multiplier, per the *Concrete Field Manual*, paragraph 7.3

907-804.02.14--Dispute Resolution. Disputes over variations between Contractor's QC test results and the Department's QA test results shall be resolved at the lowest possible level using the latest edition of the Department's *Concrete Field Manual*. When there are significant discrepancies between the QC test results and the QA test results, the Contractor's QC Manager, the Project Engineer, and/or the District Materials Engineer shall look for differences in the procedures, and correct the inappropriate procedure before requesting a third party resolution.

If the dispute cannot be resolved at the project or District level, the Department's Materials Division will serve as a third party to resolve the dispute. The Materials Division's decision shall be binding.

The Contractor shall be responsible for the cost associated with the third party resolution if the final decision is such that the Department's QA test results were correct. Likewise, the Department will be responsible for the cost when the final decision is such that the Contractor's QC test results were correct.

907-804.03--Construction Requirements.

907-804.03.1--Measurement of Materials.

907-804.03.1.1--General. The accuracy for measuring materials shall be in accordance with AASHTO Designation: M 157.

907-804.03.1.2--Measurement by Weighing. Except when otherwise specified or authorized, the materials shall be measured by weighing. The apparatus provided for weighing materials shall be

suitably designed and constructed for this purpose. Cementitious materials and aggregates shall be weighed separately. Cement in standard bags need not be weighed, but bulk cement and other cementitious materials shall be weighed. The mixing water shall be measured by volume or by weight. All measuring devices shall be subject to approval.

907-804.03.2--Blank.

907-804.03.3--Blank.

907-804.03.4--Hand Mixing. Hand mixing of concrete will not be allowed.

907-804.03.5--Delivery. The plant supplying concrete shall have sufficient capacity and transporting apparatus to ensure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper continuity in handling, placing, and furnishing of the concrete. The rate shall be such that the interval between batches shall not exceed 20 minutes. The methods of delivering and handling the concrete shall be that which will facilitate placing with minimum re-handling and without damage to the structure or the concrete.

907-804.03.6--Handling and Placing Concrete.

907-804.03.6.1--General. Prior to placing concrete, all reinforcement shall have been accurately placed in the position shown on the plans and fastened as set out in Section 805. All sawdust, chips, and other construction debris and extraneous matter shall have been removed from the interior of the forms. Temporary struts, braces, and stays holding the forms in correct shape and alignment shall be removed when the concrete placing has reached an elevation rendering their service unnecessary. These temporary members shall be entirely removed from the forms and shall not be buried in the concrete.

No concrete shall be placed until the forms and reinforcement have been inspected.

Except as provided for truck mixers and truck agitators, concrete shall be placed in the forms within 30 minutes after the time that the cement is first added to the mixture.

Concrete shall be placed so as to avoid segregation of materials and displacement of reinforcement. The use of troughs, chutes, and pipes over 25 feet in length for gravity conveyance of concrete to the forms, will not be permitted except when authorized by the Engineer and subject to the production of quality concrete.

Only approved mechanical conveyors will be permitted.

Open troughs and chutes shall be metal or metal lined. The use of aluminum pipes, chutes, or other devices made of aluminum that come into direct contact with the concrete shall not be used. Where steep slopes are required, the chutes shall be equipped with baffles or be in short sections that change the direction of movement.

All chutes, troughs, and pipes shall be kept clean and free from coatings of hardened concrete by thoroughly flushing with water after each run. Water used for flushing shall be discharged clear of the structure.

When placing operations involve dropping the concrete more than five feet, it shall be deposited through sheet metal or other approved pipes to prevent segregation and unnecessary splashing. The pipes shall be made in sections to permit discharging and raising as the placement progresses. A non-jointed pipe may be used if sufficient openings of the proper size are provided to allow for the flow of the concrete into the shaft. As far as practicable, the pipes shall be kept full of concrete during placing, and their ends shall be kept buried in the newly placed concrete.

Except as herein provided, concrete shall be placed in horizontal layers not more than 12 inches thick. When, with the Engineer's approval, less than the complete length of a layer is placed in one operation, it shall be terminated in a vertical bulkhead. Each layer shall be placed and compacted before the preceding layer has taken its initial set and shall be compacted so as to avoid the formation of a construction joint with the preceding layer.

If the Department determines that there is an excessive number of projections, swells, ridges, depressions, waves, voids, holes, honeycombs, or other defects in the completed structure, removal of the entire structure may be required as set out in Subsection 105.12.

907-804.03.6.2--Consolidation. Immediately after depositing the concrete mixture, the concrete mixture shall be thoroughly consolidated by the use of approved mechanical vibrators and suitable spading tools. Only concrete mixture which has not achieved initial set shall be consolidated. Hand spading alone will be permitted on small structural members such as railing, small culvert headwalls, and as necessary to ensure smooth surfaces and dense concrete along form surfaces, in corners, and in locations impossible to reach with vibrators. When hand spading is used for consolidation, a sufficient number of workmen with spading tools shall be provided. For hand spading, flush a thin layer of mortar to all the surfaces and thoroughly and satisfactorily consolidate the concrete.

The Contractor shall conduct operations of depositing and consolidating the concrete mixture such that the operation produces concrete which is uniformly smooth and dense, having no honeycombing or pockets of segregated aggregate.

Movement of personnel through the consolidated concrete shall not be permitted. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.

907-804.03.6.2.1--Requirements for Vibrators. Mechanical vibrators shall be subject to the following:

1. To verify compliance with these requirements, the Contractor shall provide the Engineer with a copy of the manufacturer's specifications for each type and brand of vibrator used on the project.

2. The Contractor shall provide a sufficient number of personnel with vibrators to properly consolidate each batch immediately after the concrete is placed in the forms. The Contractor shall provide at least one stand-by vibrator and required power source.
3. Concrete having been consolidated shall not be walked in or through. If it is determined it is necessary to step into previously consolidated concrete, the concrete in the stepped into area shall be consolidated again.
4. Internal vibrators shall be of the spud or tube type, meeting the following characteristics and performance:
 - a. The diameter of the head of the vibrator shall be 1¼ to 2½ inches.
 - b. The frequency of vibration shall be 8000 to 12000 vibrations per minute (Hz) while operating in the concrete.
 - c. The average amplitude shall be 0.025 to 0.05 inch while operating in air.
 - d. The minimum radius of influence shall be seven (7) inches.
 - e. The length of the vibrator head shall be nearly equal to the depth of the layer of concrete placed.
5. When the reinforcing steel is coated with epoxy, internal vibrators with heads of rubber or other resilient material shall be used. Rubber covers securely fastened over steel heads shall be acceptable.
6. For consolidation of concrete used in concrete bridge decks, the following additional requirements shall apply:
 - a. Only internal vibration shall be used.
 - b. Internal vibrators shall all be of the same type and size.
 - c. The configuration of the internal vibrators shall meet the requirements of Subsection 907-804.03.6.2.3.

907-804.03.6.2.2--Operation of Internal Vibration. Mechanical vibrators used for internal vibration shall be operated as follows:

1. Vibrators shall not be dragged or moved laterally through the concrete to transport concrete. Vibrators shall not be used in such a manner that the concrete segregates or forms pockets of grout. Vibrators shall not be applied directly or through the reinforcement to sections or layers of concrete which have taken initial set.
2. Vibrators shall only be inserted into the concrete while operating and at the point of placement to consolidate the concrete for such a length of time that there is a general cessation in the escape of large entrapped air bubbles at the surface.
3. Vibrators shall be inserted slowly into the concrete and allowed to penetrate into the concrete under their own weight.
4. Vibrators shall be inserted into the concrete while they are in a vertical position with enough flexibility to work themselves around the reinforcing steel.
5. The head of the vibrator shall be completely submerged in the concrete for a time of consolidation between 3 and 15 seconds prior to removal, unless otherwise defined by the Engineer.
6. For consolidation of two or more layers of concrete, the vibrator shall be inserted into the bottom most layer at least six (6) inches. The vibrator shall be manipulated in a series of up-and-down motions to knit the layers together.

7. Vibrators shall be removed slowly from the concrete after the consolidation has been accomplished. However, once the head of the vibrator has become only partially immersed in the concrete, vibrators shall be removed rapidly.
8. The insertions of the vibrators shall be systematically spaced such that the entire surface of the concrete comes under the influence of the vibrator during consolidation. This includes areas around the reinforcing steel, imbedded fixtures, the corners and angles of forms, and any irregular areas. The distance between insertions shall not exceed 1.5 times the radius of influence such that the area visibly affected by the vibrator overlaps the adjacent, just-vibrated area.
9. For additional information, refer to ACI 309-07, Chapter 7, Sections 7.1 through 7.3

907-804.03.6.2.3--Method of Consolidation. It is anticipated the Contractor will accomplish consolidation by internal vibration using one of the following two methods: vibrators mounted on a mechanical device or an orchestrated effort utilizing personnel. Regardless of the chosen method, the method shall be included in the QCP in accordance with Subsection 907-804.02.12.1.1.5 and shall only receive tentative approval until the method is demonstrated as effectively meeting the requirements of Subsection 907-804.03.6.2.

907-804.03.6.3--Discontinuance of Placing. When placing is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints insofar as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel. Where a "feather edge" might be produced at a construction joint, such as in the sloped top surface of a wing wall, an inset form work shall be used in the preceding layer to produce a blocked out portion that will provide an edge thickness of at least six inches (6") in the succeeding layer. Work shall not be discontinued within 18 inches of the top of any face unless provision has been made for a coping less than 18 inches thick. In this case and if permitted by the Engineer, the construction joint may be made at the underside of the coping.

Immediately following the discontinuance of placing concrete, all accumulations of mortar splashed on the reinforcement and the surface of forms shall be removed. Dried mortar chips and dust shall not be puddled into the unset concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to break or injure the concrete-steel bond at and near the surface of the concrete while cleaning the reinforcement. After initial set the forms shall not be jarred, and no strain shall be placed on the ends of projecting reinforcement until the concrete has sufficiently set to ensure against any damage by such jarring or strain.

907-804.03.6.4--Placing Bridge Concrete. The method and sequence of placing concrete shall conform to the provisions and requirements set forth for the particular type of construction.

907-804.03.6.4.1--Foundations and Substructures. Concrete seals shall be placed in accordance with Subsection 907-804.03.9. All other concrete for foundations shall be poured in the dry unless otherwise stipulated or authorization is given in writing by the Engineer to do otherwise. Concrete shall not be placed in foundations until the foundation area has been inspected and approved.

Unless otherwise specified, the placement of concrete in the substructure shall be in accordance with the general requirements of Subsection 907-804.03.6.

Unless otherwise directed, concrete in columns shall be placed in one continuous operation, and shall be allowed to set at least 12 hours before the caps are placed.

907-804.03.6.4.2--Superstructure. For simple spans, concrete shall preferably be deposited by beginning at the center of the span and working toward the ends. For continuous spans, concrete shall be deposited as shown on the plans. Concrete in girders shall be uniformly deposited for the full length of the girder and brought up evenly in horizontal layers. Concrete in areas below the bridge deck but being deposited at the same time as concrete for the bridge deck, like a diaphragm, shall be placed and consolidated sufficiently ahead of placing the concrete for the bridge deck such that the placing, consolidating, finishing, and curing of concrete for the bridge deck shall not be impeded or slowed.

Unless otherwise permitted by the Engineer, concrete shall not be placed in the superstructure until the column forms have been stripped sufficiently to determine the character of the concrete in the columns. Unless otherwise permitted by the Engineer, the load of the superstructure shall not be placed on pile bents until the caps have been in place at least seven (7) days and shall not be placed on other types of bents until the bents have been in place at least 14 days.

In placing concrete around steel shapes, it shall be placed on one side of the shape until it flushes up over the bottom flange of the shape on the opposite side, after which it shall be placed on both sides to completion.

Concrete in girder haunches less than three feet (3') in height shall be placed at the same time as that in the girder stem. Whenever a haunch or fillet has a height of three feet (3') or more at the abutment or columns, the haunch and the girder shall be poured in three successive stages: first, up to the lower side of the haunch; second, to the lower side of the girder; and third, to completion.

Except when intermediate construction joints are specified, concrete in slab, T-beam, or deck-girder spans shall be placed in one continuous operation for each span.

The floors and girders of through-girder superstructures shall be placed in one continuous operation unless otherwise specified, in which case special shear anchorage shall be provided to ensure monolithic action between girder and floor.

Concrete in box girders shall be placed as shown on the plans.

Concrete shall not be chuted directly into the forms of the span and shall be placed continuously with sufficient speed to be monolithic and to allow for finishing before initial set.

907-804.03.6.4.3--Bridge Deck. When using the Transverse Method in accordance with Subsection 907-804.03.19.7.3, the period of time between concrete placement and completion of the final curing shall be kept to a minimum, as directed by the Engineer.

907-804.03.7--Pneumatic Placing. Pneumatic placing of concrete will be permitted only if specified in the contract or if authorized by the Engineer. The equipment shall be so arranged that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by pneumatic means the equipment shall be suitable in kind and adequate in capacity for the work. The machine shall be located as close as practicable to the place of deposit. The position of the discharge end of the line shall not be more than 10 feet from the point of deposit. The discharge lines shall be horizontal or inclined upwards from the machine. At the conclusion of placement the entire equipment shall be thoroughly cleaned.

907-804.03.8--Pumping Concrete. Placement of concrete by pumping will be permitted only if specified in the contract or if authorized in writing by the Engineer. If used, the equipment shall be arranged so that no vibrations result which might damage freshly placed concrete.

Where concrete mixture is conveyed and placed by mechanically applied pressure (pumping), the equipment shall be suitable in kind and adequate in capacity for the work. The Contractor shall select concrete mixture proportions such that the concrete mixture is pumpable and placeable with the selected equipment.

The pumping equipment shall be thoroughly cleaned prior to concrete placement. Excess form release agent shall be removed from the concrete pump hopper. The Contractor shall prime the pump at no additional cost to the Department by pumping and discarding enough concrete mixture to produce a uniform mixture exiting the pump. At least 0.25 cubic yard of concrete mixture shall be pumped and discarded to prime the pump. Only concrete mixture shall be added directly into the concrete pump hopper after placement has commenced. If anything other than concrete mixture is added to the concrete pump hopper, all concrete mixture in the concrete pump hopper and pump line shall be discarded and the pump re-primed at no additional cost to the Department.

The discharge end of the pump shall be of such a configuration that the concrete does not move in the pump line under its own weight. The intent of this requirement is to ensure that entrained air in the concrete mixture remains entrained during pumping and depositing the concrete mixture. This shall be accomplished with one or both of the following:

- a minimum 10-foot flexible hose attached to the discharge end of a steel reducer having a minimum length of three (3) feet and a minimum reduction in area of 20% which is attached to the discharge end of the pump line, or
- a flexible reducing hose to the discharge end of the pumpline with a minimum reduction in area of 20% over a minimum 10-foot hose length.

Regardless of the configuration chosen, the Contractor shall ensure that the concrete is pumped and does not free-fall more than five (5) feet within the entire length of pump line and after discharge from the end of pump line.

The Contractor shall not have any type of metal elbow, metal pipe, or other metal fitting within five (5) feet of any person during discharge of concrete mixture.

Boom pumps shall have a current Concrete Pump Manufacturers Association's ASME/ANSI B30.27 certification. Equipment added to the boom and pump line shall meet the pump manufacturer's specifications and shall not exceed the manufacturer's maximum recommended weight limit for equipment added to the boom and pump line.

The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe line, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned.

The use of aluminum pipe as a conveyance for the concrete will not be permitted.

907-804.03.9--Depositing Concrete Under Water. Concrete shall not be deposited in water except with the approval of the Engineer.

Concrete deposited under water shall be Class S.

Concrete deposited under water shall be carefully placed in a compact mass in its final position by means of a tremie, a bottom dump bucket, or other approved method and shall not be disturbed after being deposited. Special care shall be exercised to maintain still water at the point of deposit. No concrete shall be placed in running water and all form work designed to retain concrete under water shall be water-tight. The consistency of the concrete shall be carefully regulated, and special care shall be exercised to prevent segregation of materials.

Concrete seals shall be placed continuously from start to finish, and the surface of the concrete shall be kept as nearly horizontal as practicable at all times. To ensure thorough bonding, each succeeding layer of a seal shall be placed before the preceding layer has taken initial set.

When a tremie is used, it shall consist of a tube having a diameter of at least 10 inches and constructed in sections having flanged couplings fitted with gaskets. The means of supporting the tremie shall be such as to permit the free movement of the discharge over the entire top surface of the work and to permit it to be lowered rapidly when necessary to choke off or retard the flow of concrete. The discharge end shall be closed at the start of the work so as to prevent water entering the tube and shall be entirely sealed. The tremie tube shall be kept full to the bottom of the hopper. When a batch is dumped into the hopper, the flow of concrete shall be induced by slightly raising the discharge end, always keeping it in the deposited concrete. The flow is then stopped by lowering the tremie. The flow shall be continuous until the work is completed.

Depositing of concrete by the drop bottom bucket method shall conform to the following: The top of the bucket shall be open. The bottom doors shall open freely downward and outward when tripped. The bucket shall be completely filled and slowly lowered to avoid backwash. It shall not be dumped until it rests on the surface upon which the concrete is to be deposited and when discharged shall be withdrawn slowly until well above the concrete.

Dewatering may proceed when the concrete seal is sufficiently hard and strong. As a general rule, this time will be 48 hours for concrete made with high-early-strength cement and three days for concrete made with other types of cement. All laitance and other unsatisfactory material shall be removed from the exposed surface by scraping, chipping, or other means which will not injure the surface of the concrete.

907-804.03.10--Construction Joints.

907-804.03.10.1--General. Unless otherwise approved by the Engineer, construction joints shall be made only where located on the plans or shown in the pouring schedule. If not detailed on the plans, or in the case of emergency, construction joints shall be placed as directed by the Engineer. Shear keys or inclined reinforcement shall be used where necessary to transmit shear or to bond the two sections together.

For continuous spans, bridge deck concrete shall be deposited as shown on the plans. Deviation from the pouring schedule shown in the plans is not permitted.

907-804.03.10.2--Bonding. Before depositing new concrete on or against concrete which has hardened, the forms shall be retightened. The surface of the hardened concrete shall be roughened as required by the Engineer and in a manner that will not leave loosened particles of aggregate or damaged concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance and saturated with water. When directed by the Engineer, the cleaned and saturated surfaces, including vertical and inclined surfaces, shall first be thoroughly covered with a coating of mortar or neat cement grout against which the new concrete shall be placed before the grout has attained its initial set.

The placing of concrete shall be carried continuously from joint to joint. The face edges of all joints which are exposed to view shall be carefully finished, true to line and elevation.

In order to bond successive courses suitable depressed or raised keys of the designated size shall be constructed. Raised keys shall be monolithic with the concrete of the lower course.

907-804.03.11--Concrete Exposed to Seawater. Unless otherwise specifically provided, concrete for structures exposed to seawater shall be Class AA concrete as referenced in Subsection 907-804.02.10. The clear distance from the face of the concrete to the nearest face of reinforcing steel shall be at least four inches. The mixing time and the water content shall be carefully controlled and regulated so as to produce concrete of maximum impermeability. The concrete shall be thoroughly compacted, and stone pockets shall be avoided. No construction joints shall be formed between the levels of extreme low water and extreme high water as determined by the Engineer. Between these levels, seawater shall not come in direct contact with the new concrete until at least 30 days have elapsed. The surface concrete as left by the forms shall be left undisturbed.

907-804.03.12--Blank.

907-804.03.13--Falsework. The Contractor shall submit to the Engineer four copies of structural design analysis and detail drawings, which show the method of falsework or centering. These designs and detail plans shall be prepared and bear the seal of a Registered Professional Engineer with experience in falsework design.

Falsework plans shall include falsework elevations together with all other dimensions and details which is considered necessary for the construction. Other pertinent data needed is size and spacing of all falsework members and minimum bearing requirements for false piles.

Upon completion of falsework erection, the Registered Professional Engineer shall certify that the erected falsework is capable of supporting the load for construction.

Falsework piling shall be spaced and driven so that the bearing value of each pile is sufficient to support the load that will be imposed upon it. The bearing value of the piles should be calculated according to the appropriate formula given in Section 803.

For designing falsework and centering, a weight of 150 pounds per cubic foot shall be assumed for green concrete. All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads without appreciable settlement or deformation. The Contractor may be required to employ screw jacks or hardwood wedges to take up slight settlement in the falsework either before or during the placing of concrete. An allowance shall be made for anticipated compressibility of falsework and for the placement of shims, wedges, or jacks to produce the permanent structural camber shown on the plans. If during construction, any weakness develops and the falsework shows any undue settlement or distortion, the work shall be stopped, the part of the structure affected removed, and the falsework strengthened before work is resumed. Falsework which cannot be founded on a satisfactory footing shall be supported on piling, which shall be spaced, driven, and removed, as referenced in Subsection 907-804.03.15, in a manner approved by the Engineer.

All structures built across a public street or highway on which maintenance of traffic is required, shall have falsework so arranged that a vertical clearance of at least 12' 6" is provided. Unless otherwise specified, a horizontal clearance of at least the width of the traveled way shall be provided at all times. If the vertical clearance is less than 13' 6" or the horizontal clearance is less than the full crown width of the roadway, the Contractor shall install and maintain appropriate safety devices, clearance signs and warning lights, and shall notify the Engineer sufficiently in advance of restricting the clearance for the Engineer to advise both the Traffic Engineering and the Maintenance Divisions. All traffic control and safety devices shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

907-804.03.14--Forms.

907-804.03.14.1--General. Forms shall be wood, metal, or other material approved by the Engineer. All forms shall be built mortar-tight and sufficiently rigid to prevent distortion due to pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the opening of joints due to shrinkage. The forms shall be substantial and unyielding and shall be so designed that the finished concrete

will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

Minimum requirements for slab overhang forms shall be 3/4-inch plywood supported on 2-inch x 6-inch S4S wood timbers placed flatwise on 16-inch centers.

Adjustable brackets for support of slab overhang forms shall be spaced at a maximum distance of 3' 0" center to center unless specifically approved otherwise. Grade points for forms shall coincide with the location of the adjustable form brackets.

Forms for surfaces exposed to view shall be of uniform thickness with a smooth inside surface of an approved type. Joints in forms for exposed surfaces shall be closely fitted to eliminate fins, stone pockets, or other variations in the surface of the concrete which would mar a smooth and uniform texture.

Forms shall be filleted at all sharp corners and shall be given a bevel or draft in the case of all projections, such as girders and copings, to ensure easy removal.

Metal ties or anchorages within the forms shall be so constructed as to permit their removal, without injury to the concrete, to a depth of at least the reinforcing steel clearance shown on the plans. In case ordinary wire ties are permitted, all wires, upon removal of the forms, shall be cut back at least 1/4 inch from the face of the concrete with chisels or nippers. Nippers shall be used for green concrete. All fittings for metal ties shall be designed so that upon their removal the cavities which are left will be the smallest practicable size. The cavities shall be filled with cement mortar and the surface left sound, smooth, even, and uniform in color.

Forms shall be set and maintained to the lines designated until the concrete is sufficiently cured for form removal. Forms shall remain in place for periods which shall be determined as hereinafter specified. If forms are deemed to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer will order the work stopped until the defects have been corrected.

The shape, strength, rigidity, water-tightness, and surface smoothness of reused forms shall be maintained at all times. Warped or bulged lumber shall be resized before being reused. Forms which are unsatisfactory in any respect shall not be reused.

Access to the lower portions of forms for narrow walls and columns shall be provided for cleaning out extraneous material immediately before placing the concrete.

All forms shall be treated with an approved oil or saturated with water immediately before placing the concrete. For rail members or other members with exposed faces, the forms shall be treated only with an approved oil to prevent the adherence of concrete. Any material which will adhere to or discolor the concrete shall not be used.

When metal forms are used they shall be kept free from rust, grease, or other foreign matter which will discolor the concrete. They shall be of sufficient thickness and so connected that they will remain true to shape and line, and shall conform in all respects as herein prescribed for mortar

tightness, filleted corners, beveled projections, etc. They shall be constructed so as to ensure easy removal without injury to concrete. All inside bolt and rivet heads shall be countersunk.

All chamfer strips shall be dressed, straight, and of uniform width and shall be maintained as such at all times.

907-804.03.14.2--Stay-In-Place Metal Forms. Stay-in-place (SIP) metal forms are corrugated metal sheets permanently installed between the supporting superstructure members. After the concrete has cured, these forms shall remain in place as permanent, non-structural members of the bridge.

Pay quantities for deck concrete will be computed from the dimensions shown in the Contract Plans with no allowance for changes in deflection and /or changes in dimensions necessary to accommodate the SIP metal forms.

There will be no direct payment for the cost of the forms and form supports, or any material, tools, equipment, or labor incidental thereto, but the cost shall be considered absorbed in the contract unit price for concrete.

Before fabricating any material, three (3) complete sets of SIP metal form shop drawings and design calculations, bearing the Design Engineer's Seal, shall be submitted to the Director of Structures, State Bridge Engineer, through the Engineer, for review. The Contractor's SIP metal form Design Engineer shall be a MS Registered Professional Engineer who is knowledgeable in the field of structural design.

In no case shall additional dead load produced by the use of SIP metal forms overstress any bridge component. Design calculations shall indicate any additional dead load from SIP metal form self-weight, form support hangers, concrete in flutes, concrete due to form deflection, etc. not included in the Contract Plans. The additional dead loads shall be clearly labeled and tabulated on the shop drawings. Bridge Division will evaluate the additional load for overstress of the bridge components. In the event that the additional dead load produces an overstress in any bridge component, Bridge Division will reject the Contractor's design. Deflection and loads produced by deflection of the SIP metal forms shall be considered and indicated in the design calculations.

The cambers and deflections provided in the Contract Plans do not consider the effects of SIP metal forms. The Contractor's Engineer shall take into account the weight of the forms and any additional dead load when developing the "Bridge Superstructure Construction Plan".

For the purpose of reducing any additional dead load produced by the SIP metal forms, the flutes of SIP metal forms may be filled with polystyrene foam. When polystyrene foam is used to fill the forms, the form flutes shall be filled completely; no portion of the polystyrene foam shall extend beyond the limits of the flutes. The Contractor shall ensure that the polystyrene foam remains in its required position within flutes during the entire concrete placement process. The Contractor shall not use reinforcing steel supports or other accessories in such a manner as to cause damage to the polystyrene foam. All damaged polystyrene foam shall be replaced to the

satisfaction of the Engineer. All welding of formwork shall be completed prior to placement of polystyrene foam.

For bridges not located in horizontal curves, the Contractor may reduce the additional dead load by matching the flute spacing with the transverse steel spacing of the bottom layer. The bottom longitudinal layer of steel shall have one (1) inch of minimum concrete cover measured from the bottom of the reinforcing to the top of the flute. The Contractor will not be allowed to vary the reinforcing steel spacing or size from the Contract Plans for the purpose of matching flute spacing.

907-804.03.14.2.1--Materials. SIP metal forms and supports shall meet the requirements of ASTM Designation: A653 having a coating designation G165. Form materials that are less than 0.03-inch uncoated thickness shall not be allowed.

907-804.03.14.2.2--Certification. The Contractor shall provide written certification from the manufacturer stating the product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.3--Polystyrene Foam. The polystyrene foam shall be comprised of expanded polystyrene manufactured from virgin resin of sufficient density to support the weight of concrete without deformation. The polystyrene foam shall be extruded to match the geometry of the flutes and provide a snug fit. The polystyrene foam shall have a density of not less than 0.8 pounds per cubic foot. The polystyrene foam shall have water absorption of less than 2.6% when tested according to ASTM Designation: C272. The Contractor shall provide written certification from the manufacturer stating the polystyrene foam product meets the requirements of this specification to the Engineer along with the delivery of the coated forms to the job site.

907-804.03.14.2.4--Design. The design of the SIP metal forms shall meet the following criteria.

1. The maximum self-weight of the stay in place metal forms, plus the weight of the concrete or expanded polystyrene required to fill the form flutes (where used), shall not exceed 20 psf.
2. The forms shall be designed on the basis of dead load of form, reinforcement, and plastic concrete plus 50 pounds per square foot for construction loads. The design shall use a unit working stress in the steel sheet of not more than 0.725 of the specified minimum yield strength of the material furnished, but not to exceed 36,000 psi.
3. Deflection under the weight of the forms, reinforcement, and plastic concrete shall not exceed 1/180 of the form span or 1/2 inch, whichever is less, for form spans of 10 feet or less, or 1/240 of the form span or 3/4 inch, whichever is less, for form spans greater than 10 feet.
4. The design span of the form shall equal the clear span of the form plus two (2) inches. The span shall be measure parallel to the form flutes.

5. Physical design properties shall be computed in accordance with requirements of the AISI Specifications for the Design of Cold Formed Steel Structural Members, latest published edition.
6. The design concrete cover required by the plans shall be maintained for all reinforcement.
7. The plan dimensions of both layers of primary deck reinforcement from the top surface of the concrete deck shall be maintained.
8. The SIP metal form shall not be considered as lateral bracing for compression flanges of supporting structural members.
9. SIP metal forms shall not be used under closure pours or in bays where longitudinal slab construction joints are located. SIP metal forms shall not be used under cantilevered slabs such as the overhang outside of fascia members.
10. Forms shall be secured to the supporting members by means other than welding directly to the member. Welding to the top flanges of steel stringers and/or girders shall not be allowed. Alternate installation procedures shall be submitted addressing this condition.

907-804.03.14.2.5--Construction. SIP metal form sheets shall not rest directly on the top of the stringer or floor beam flanges. Sheets shall be fastened securely to form supports, and maintain a minimum bearing length of one (1) inch at each end for metal forms. Form supports shall be placed in direct contact with the flange of the stringer or floor beam. All attachments for coated metal forms shall be made by bolts, clips, screws, or other approved means.

907-804.03.14.2.6--Form Galvanizing Repairs. Where forms or their installation are unsatisfactory in the opinion of the Engineer, either before or during placement of the concrete, the Contractor shall correct the defects before proceeding with the construction work. The cost of such corrective work shall be at the sole expense of the Contractor. Minor heat discoloration in areas of welds shall not be touched up.

907-804.03.14.2.7--Concrete. The Contractor shall ensure concrete placement does not damage the SIP metal forms. Approved pouring sequences shall be used. The completed SIP metal form system shall be sufficiently tight to prevent leakage of mortar or concrete. The concrete shall be consolidated to avoid honeycomb and voids, especially at construction joints, expansion joints, valleys, and ends of form sheets. Calcium chloride or any other admixture containing chloride salts shall not be used in the concrete.

907-804.03.14.2.8--Inspection. The Engineer will observe the Contractor's method of construction during all phases of the construction of the bridge deck slab, including the installation of the SIP metal form system; location and fastening of the reinforcement; composition of concrete items; mixing procedures, concrete placement, and vibration; and finishing of the bridge deck. Should the Engineer determine that the procedures used during the placement of the concrete warrant inspection of the underside of the deck, at least one section of the metal forms shall be removed in each span for this purpose. This shall be done as soon after placing the concrete as

practical in order to provide visual evidence that the concrete mix and the procedures are obtaining the desired results. An additional section shall be removed in any span if the Engineer determines that there has been any change in the concrete mix or in the procedures warranting additional inspection.

If, in the Engineer's judgment, inspection is needed to check for defects in the bottom of the deck or to verify soundness, the SIP metal forms shall be sounded with a hammer after the deck concrete has been in place a minimum of two days. If sounding discloses areas of doubtful soundness to the Engineer, the SIP metal forms shall be removed from such areas for visual inspection after the concrete has attained adequate strength. The SIP metal bridge deck forms shall be removed at no expense to the State.

At locations where sections of the metal forms have been removed, the Engineer will not require the Contractor to replace the metal forms. The adjacent metal forms and supports shall be repaired to present a neat appearance and to ensure their satisfactory retention. As soon as the form is removed, the Engineer will examine the concrete surfaces for cavities, honeycombing, and other defects. If irregularities are found and the Engineer determines that these irregularities do not justify rejection of the work, the concrete shall be repaired as directed by the Engineer. If the Engineer determines that the concrete where the form is removed is unsatisfactory, additional metal forms as necessary shall be removed to inspect and repair the slab, and the Contractor's method of construction shall be modified as required to obtain satisfactory concrete in the slab. All unsatisfactory concrete shall be removed and replaced as directed at no expense to the State.

If the method of construction and the results of the inspections as outlined above indicate that sound concrete has been obtained throughout the slabs, the amount of sounding and form removal may be reduced when approved by the Engineer.

The Contractor shall provide a safe and convenient means of conducting of the inspection.

907-804.03.15--Removal of Falsework, Forms, and Housing. In the determination of the time for the removal of falsework, forms, and housing and the discontinuance of heating, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete, and the materials used in the mix. No forms or supports shall be removed prior to approval by the Engineer. During cold weather, removal of housing and the discontinuance of heating shall be in accordance with Subsection 907-804.03.16.1.

Concrete in the last pour of a continuous superstructure shall have attained a compressive strength of 2,400 psi, as determined by cylinder tests or maturity meter probe, prior to striking any falsework. It is important that falsework be removed as evenly as possible to prevent excessive deflection stresses in the spans.

At the Contractor's option and with the approval of the Engineer, the time for removal of forms may be determined by cylinder tests, in accordance with the requirements listed in Table 6, in which case the Contractor shall furnish facilities for testing the cylinders. The facilities shall include an approved concrete testing machine of sufficient capacity and calibrated by an acceptable commercial laboratory. Tests shall be conducted in the presence of a Department representative

to witness and record strengths obtained on each break or performed by a Department certified technician in an approved testing laboratory.

[a1]The cylinders shall be cured under conditions which are not more favorable than those existing for the portions of the structure which they represent.

Table 6
Minimum Compressive Strength Requirements for Form Removal

Forms:

Columns	1000 psi
Side of Beams	1000 psi
Walls not under pressure	1000 psi
Floor Slabs, overhead	2000 psi
Floor Slabs, between beams	2000 psi
Slab Spans	2400 psi
Other Parts	1000 psi

Centering:

Under Beams	2400 psi
Under Bent Caps	2000 psi

Limitation for Placing Beams on:

Pile Bents, pile under beam	2000 psi
Frame Bents, two or more columns	2200 psi
Frame Bents, single column	2400 psi

For bridges, non-SIP metal forms for bridge deck slabs overhead and bridge deck slabs between beams shall be removed with the approval of the Engineer, between two weeks and four weeks after the removal of the wet burlap applied in accordance with Subsection 907-804.03.17.1, or application of liquid membrane applied in accordance with Subsection 907-804.03.17.2.

In lieu of using concrete strength cylinders to determine when falsework, forms, and housings can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. Falsework, forms, and housings may be removed when maturity meter readings indicate that the required concrete strength is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

Table 7
Requirements for use of Maturity Meter Probes

Structure Component	Quantity of Concrete	No. of Probes
Slabs, beams, walls, & miscellaneous items	0 - 30 yd ³	2
	> 30 to 60 yd ³	3
	> 60 to 90 yd ³	4
	> 90 yd ³	5
Footings, Columns & Caps	0 - 13 yd ³	2
	> 13 yd ³	3
Pavement, Pavement Overlays	1200 yd ²	2
Pavement Repairs	Per repair or 900 yd ² Whichever is smaller	2

Methods of form removal likely to cause overstressing of the concrete shall not be used. Forms and supports shall be removed in a manner that will permit the concrete to uniformly and gradually take the stresses due to its own weight. Centers shall be gradually and uniformly lowered in a manner that will avoid injurious stresses in any part of the structure.

As soon as concrete for railings, ornamental work, parapets and vertical faces which require a rubbed finish has attained a safe strength, the forms shall be carefully removed without marring the surfaces and corners, the required finishing performed, and the required curing continued.

Prior to final inspection of the work, the Contractor shall remove all falsework, forms, excavated material or other material placed in the stream channel during construction. Falsework piles may be cut or broken off at least one foot below the mudline or ground line unless the plans specifically indicate that they are to be pulled and completely removed from the channel.

907-804.03.16--Cold or Hot Weather Concreting.

907-804.03.16.1--Cold Weather Concreting. In cold weather, the temperature of the concrete when delivered to the job site shall conform to the temperature limitations of "Temperature Limitations on Concrete when Delivered to Job Site" listed in Table 8 below. Cold weather is defined as three consecutive days when there is a probability that the daily average of the highest and lowest ambient temperatures is expected to be less than 40°F. This three-day forecast shall be based on the latest information available from the National Weather Service.

When the Contractor proposes to place concrete during seasons when there is a probability of ambient temperatures lower than 40°F, the Contractor shall have available on the project the approved facilities necessary to enclose uncured concrete and to keep the temperature of the air inside the enclosure within the ranges and for the minimum periods specified herein.

When there are indications of temperatures of less than 40°F during the first four days after placement of the concrete, the concrete shall be protected from cold temperatures by maintaining a temperature between 50°F and 100°F for at least four days after placement and between 40°F and 100°F for at least three additional days. The Contractor shall use such heating equipment such as stoves, salamanders, or steam equipment as deemed necessary to protect the concrete. When dry heat is used, means of maintaining atmospheric moisture shall be provided.

At the option of the Contractor with the approval of the Engineer, when concrete is placed during cold weather and there is a probability of ambient temperatures lower than 40°F, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 7. An approved insulating blanketing material shall be used to protect the work when ambient temperatures are less than 40°F and shall remain in place until the required concrete strength in Table 6 is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T 325 and ASTM Designation: C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

One or more of the aggregates and/or mixing water may be heated. The aggregates may be heated by steam, dry heat, or by placing in the mixing water which has been heated. Frozen aggregates shall not be used. When either aggregates or water are heated above 100°F, the aggregates and water shall be combined first in the mixer before the cement is added to avoid flash set. Cement shall not be mixed with water or with a mixture of water and aggregate having a temperature greater than 100°F.

The use of salt or other chemical admixtures in lieu of heating will not be permitted.

Before placing concrete, all ice or frost shall be removed from the forms and reinforcement.

In the case of concrete placed directly on or in the ground, such as for footings or bottom slabs, protection and curing during cold weather may be provided as set for concrete pavement under Subsection 501.03.20.3.

The Contractor shall assume all risk and added cost connected with the placing and protecting of concrete during cold weather. Permission given by the Engineer to place concrete during such time will in no way relieve the Contractor of responsibility for satisfactory results. Should it be determined at any time that the concrete placed under such conditions is unsatisfactory, it shall be removed and replaced with satisfactory concrete by the Contractor without extra compensation.

TABLE 8
COLD WEATHER TEMPERATURE LIMITATIONS ON CONCRETE WHEN
DELIVERED TO JOB SITE

Section thickness in the least dimension inches	Jobsite Acceptance Temperature Range °F
Less than 12	55 to 75
12 to 36	50 to 70
36 to 72	45 to 65
Greater than 72	40 to 60

907-804.03.16.2--Hot Weather Concreting. The manufacture, placement, and protection of concrete during hot weather requires special attention to ensure that uniform slump ranges and satisfactory placement qualities are maintained, that surface cracking is held to a minimum, and that design strengths are produced.

When the ambient temperature is above 90°F, the forms, reinforcing steel, steel beam flanges, and other surfaces which will come in contact with the concrete shall be cooled to below 90°F by means of a water spray or other approved methods.

When the atmospheric temperature is predicted to be 90°F or above based on the latest information available from the National Weather Service any time during the day of placement or day after placement, the time of placement shall not begin until 5:00 p.m. on the day of placement and shall be completed by 6:00 a.m. the following day.

907-804.03.17--Curing Concrete. Curing is defined as all actions taken to ensure the moisture and temperature conditions of freshly placed concrete exist so the concrete may develop its potential properties. Curing shall take place from the time of placement until its potential properties have developed. The Contractor shall use the guidance in ACI 308R-01 to:

- a) cure the concrete in such a manner as to prevent premature moisture loss from the concrete,
- b) supply additional moisture to the concrete as required in order to ensure sufficient moisture within the concrete, and
- c) maintain a concrete temperature beneficial to the concrete.

Curing in accordance with the requirements in either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall be completely established within 20 minutes after finishing, except as noted for bridge decks. Finishing is complete when the pan drag, burlap drag, or other finishing method is complete.

When stay-in-place (SIP) metal forms are used in accordance with Subsection 907-804.03.14.2 in conjunction with the Transverse Method in accordance with Subsection 804.03.19.7.3, if the concrete mixture contains lightweight aggregate (LWA) meeting the requirements of Subsection 907-703.19.2 and an internal curing water content of 8.0 pounds or greater per 100 pounds of total cementitious materials, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2. The minimum amount of LWA shall be established following the information in the Department's *Concrete Field Manual*, Paragraph 5.5.5. If the concrete mixture does not meet or exceed this internal curing water content, curing shall be accomplished in accordance with Subsection 907-804.03.17.1.

When SIP metal forms are not used or used in conjunction with the Longitudinal Method in accordance with Subsection 804.03.19.7.2, curing shall be accomplished in accordance with either Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2.

The length of time for curing shall be maintained in accordance with either of the following:

- 1. Prescribed Length of Time:**

- a) Curing following the requirements of Subsection 907-804.03.17.1 shall continue uninterrupted for at least 14 days.
- b) Curing following the requirements of Subsection 907-804.03.17.2 shall continue uninterrupted for at least 10 days.

OR

2. Length of Time Defined by Development of Compressive Strength:

Curing following the application requirements of Subsection 907-804.03.17.1 or Subsection 907-804.03.17.2 shall continue uninterrupted for each day's production until the compressive strength of the concrete exceeds 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Therefore, if an area is being cured in accordance with Subsection 907-804.03.17.1, the curing by wet burlap shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1. Likewise, if an area is being cured in accordance with Subsection 907-804.03.17.2, the curing by liquid membrane shall continue until the concrete in that area has attained a minimum of 75% of the 28-day compressive strength submitted as the Basis of Proportioning per Subsection 907-804.02.10.1.

The compressive strength of the concrete may be determined by the use of maturity meter in accordance with Subsection 907-804.03.15.

907-804.03.17.1--Water With Waterproof Cover. All burlap shall be completely saturated and wet prior to placing it on the concrete. The burlap shall have been fully soaked in water for a minimum of 12 hours prior to placement on the concrete.

For bridge decks, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of the initial strike-off for bridges without a skew and 25 minutes of the initial strike-off for bridges with a skew. For all other concrete, the Contractor shall apply one (1) layer of saturated burlap within 20 minutes of completing finishing.

For bridge decks, following the first layer of burlap, the Contractor shall apply a second layer of saturated burlap within five (5) minutes of applying the first layer.

The applied burlap shall completely cover all exposed concrete surfaces. In areas where the burlap may not be directly applied due to the concrete surface, for example, in areas where reinforcing steel protrudes thru the concrete surface, like in the areas of a bridge deck where the bridge railing will be constructed at a later time, the saturated burlap shall be draped over the steel. The concrete surface shall not be allowed to dry after strike-off or at any time during the curing period.

The Contractor shall maintain the burlap in a fully wet condition using powered fogging equipment capable of producing a fog spray of atomized droplets of water until the concrete has gained sufficient strength to allow foot traffic without the foot traffic marring the surface of the concrete. Burlap shall not be maintained in the fully wet condition using equipment which does not produce a fog spray of atomized droplets of water or by use of manually pressurized sprayers.

For bridge decks, once the concrete has gained sufficient strength to allow foot traffic which does not mar the surface of the concrete, soaker hoses shall be placed on the burlap. The soaker hoses shall then be supplied with running water continuously to maintain continuous saturation of all burlap and the entire concrete surface.

If there is a delay in the placement of the first layer of saturated burlap outside the time limit, the struck-off and finished concrete shall be kept wet by use of the powered fogging equipment used to keep the burlap wet.

White polyethylene sheets shall be placed on top of the wet burlap and, as applicable, soaker hoses, covering the entire concrete surface as soon as practical and not more than 12 hours after the placement of the concrete. White polyethylene sheets of the widest practical width shall be used, overlapping adjacent sheets a minimum of six inches (6") and tightly sealed with an adhesive like pressure sensitive tape, mastic, glue, or other approved methods to form a complete waterproof cover of the entire concrete surface. White polyethylene sheets which overlap a minimum of two feet (2') may be held in place using means other than an adhesive. The white polyethylene sheets shall be secured so that wind will not displace them. The Contractor shall immediately repair the broken or damaged portions or replace sections that have lost their waterproof qualities.

If burlap and/or white polyethylene sheets are temporarily removed for any reason during the curing period, the Contractor shall keep the entire exposed area continuously wet. The saturated burlap and white polyethylene sheets shall be replaced, resuming the specified curing conditions, as soon as possible.

The Contractor shall inspect the bridge deck surface once every eight (8) hours for the entirety of the curing period, so that all areas remain wet for the entire curing period and all curing requirements are satisfied and document the inspection in accordance with Subsection 907-804.03.17.1.1.

At the end of the curing period, one coating of liquid membrane shall be applied following the requirements of Subsection 907-804.03.17.1.2. The purpose of the coating of liquid membrane is to allow for slow drying of the concrete. The application of liquid membrane to any area shall be complete within 30 minutes of the beginning of removal of the white polyethylene sheets, soaker hoses, and burlap from this area.

907-804.03.17.1.1--Documentation for Bridge Decks. The Contractor shall provide the Engineer with a daily inspection report that includes:

- documentation that identifies any deficiencies found (including location of deficiency);
- documentation of corrective measures taken;
- a statement of certification that all areas are wet and all curing material is in place on the entire bridge deck;
- documentation showing the time and date of all inspections and the inspector's signature;
- documentation of any temporary removal of curing materials including location, date and time, length of time curing was removed, and means taken to ensure exposed area was kept continuously wet.

907-804.03.17.1.2--Liquid Membrane. At the end of the 14-day wet curing period the wet burlap and polyethylene sheets shall be removed and within 30 minutes, the Contractor shall apply white liquid membrane to the deck. The liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The application of liquid membrane shall be accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first application of liquid membrane.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The coating shall be protected against marring for at least seven (7) days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

The 7-day period during which the liquid membrane is applied and protected shall not be reduced even if the period of wet curing is extended past the required 14 days.

907-804.03.17.1.2.1--Liquid Membrane Documentation. The Contractor shall make available to the Engineer an application rate verification method and any information necessary during application of the liquid membrane to verify that the rate of application meets the prescribed rate for the various surfaces of the concrete, including, but not limited to, the top surface of the bridge deck and exposed sides of the bridge deck after any forms are removed. The Contractor shall submit this application verification method to the Engineer in accordance with Subsection 907-804.02.12.1.1.

One method of verifying the rate of application is as follows:

1. Determine the volume of liquid membrane in the container. For a container with a uniform cross-sectional area, for example a 55-gallon drum, determine the area of the cross-section. Determine the height of the surface of the liquid membrane from the bottom of the container. This may be accomplished by inserting a sufficiently long, clean dip-stick parallel with the axis of the container into the liquid membrane until the inserted end of the dip-stick contacts the bottom of the container. On removing the dip-stick, measure the length from the end which was inserted to the point on the dip-stick where the liquid membrane ceases to coat the dip-stick. Multiply the area of the cross-section by the height of the level of liquid membrane, maintaining consistent units, to determine the volume.
2. Perform step 1 prior to beginning applying the liquid membrane to establish the initial volume.
3. During the period of application, perform step 1 each 100 square feet of bridge deck.
4. In order to meet the required application rate of one (1) gallon per 200 square feet, the amount in the container shall be at least 0.5 gallon less than the previous volume in the previous 100 square feet. Other changes in volume may apply depending on the manufacturer's recommended application rate.
5. Additional applications to an area shall be applied until the required rate is satisfied. Areas which are not visually satisfactory to the Engineer shall have additional liquid membrane applied as directed by the Engineer.

The amount of liquid membrane applied shall be determined each day using the application verification method. This information shall be submitted to the Engineer within 24 hours of applying the liquid membrane.

907-804.03.17.2--Liquid Membrane Method. All surfaces on which curing is to be by liquid membrane shall be given the required surface finish prior to the application of liquid membrane. Concrete surfaces cured by liquid membrane shall receive two applications of white liquid membrane. Neither application shall be made from a position supported by or in contact with the freshly placed concrete. Both applications shall be applied perpendicularly to the surface of the concrete.

When using liquid membrane, the liquid membrane shall be thoroughly mixed within the time recommended by the liquid membrane producer but no more than an hour before use. If the use of liquid membrane results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

The application of liquid membrane shall accomplished by the use of power applied spray equipment using nozzles and other equipment recommended by the liquid membrane producer. Manually pressurized or manual pump-up type sprayers shall not be used to apply the first two applications of liquid membrane.

The liquid membrane shall be applied when no free water remains on the surface but while the surface is still wet. The liquid membrane shall be applied according to the manufacturer's instructions with a minimum spreading rate per coat of one (1) gallon per 200 square feet of concrete surface. If the concrete is dry or becomes dry, the Contractor shall thoroughly wet it with water applied as a fog spray by means of approved equipment.

The first application of the liquid membrane shall be made as the work progresses. For bridge decks, the first application shall be completed in each area of the deck, including the area in which the bridge railing will be later constructed, within 20 minutes of initial strike-off for bridges with no skew and within 25 minutes of initial strike-off for bridges with skew. For all other concrete, the first application of the liquid membrane shall be completed within 20 minutes of finishing.

The second application shall be applied within 30 minutes after the first application. The liquid membrane shall be uniformly applied to all exposed concrete surfaces.

As a visual guide, the color of concrete covered with the required amount of liquid membrane should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five feet (5') away horizontally if standing on the same grade as the concrete. The appearance of the concrete does not supersede applying the minimum spreading rate.

The Contractor shall make available to the Engineer an application rate verification in accordance with Subsection 907-804.03.17.1.2.1.

The coating shall be protected against marring for at least 10 days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Manually pressurized or manual pump-up type sprayers may be used for giving marred areas the required additional application of liquid membrane. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

After the specified time for curing, but prior to constructing the bridge railing, all liquid membrane shall be removed from both the exposed surfaces of the reinforcing steel and the concrete surfaces on which bridge rail will be constructed. This removal of liquid membrane may be accomplished by high pressure washing or other methods approved by the Engineer.

907-804.03.18--Expansion and Fixed Joints, Bearings, Anchor Bolts, Plates, Castings, Pipes, Drains, Conduits, Etc. All joints shall be constructed according to details shown on the plans. The edges of the concrete at open or filled joints shall be chamfered or edged as indicated on the plans.

907-804.03.18.1--Open Joints. Open joints shall be placed in the locations shown on the plans and shall be constructed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material. The insertion and removal of the template shall be accomplished without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint unless so specified on the plans.

907-804.03.18.2--Filled Joints. Poured expansion joints and joints to be sealed with premolded materials shall be constructed similar to open joints. When premolded types are specified, the filler shall be placed in correct position as the concrete on one side of the joint is placed. When

the form is removed, the concrete on the other side shall be placed. Adequate water stops of metal, rubber, or plastic shall be carefully placed as shown on the plans.

907-804.03.18.3--Premolded and Preformed Joint Seals. When preformed elastomeric compressive joint seals are specified, the previously formed and cured open joint shall be thoroughly cleaned of all foreign matter, the required adhesive uniformly applied, and the seal installed in accordance with the recommendations of the manufacturer of the seal.

When premolded filler is used for the joints in the roadway slab, the tops shall be adequately sealed with poured joint filler in accordance with details on the plans. Premolded filler shall be permanently fastened to an adjacent concrete surface by appropriate use of copper wire, copper nails, or galvanized nails.

907-804.03.18.4--Steel Joints. The plates, angles, or other structural shapes shall be accurately shaped at the shop to conform to the section of the concrete floor. Fabrication and painting shall conform to the specifications covering those items. When called for on the plans or in the special provisions, the material shall be galvanized in lieu of painting. Care shall be taken to ensure that the surface in the finished plane is true and free of warping. Positive methods shall be employed in placing the joints to keep them in correct position during the placing of the concrete. The opening at expansion joints shall be that designated on the plans at normal temperature, and care shall be taken to avoid impairment of the clearance in any manner.

907-804.03.18.5--Water Stops. Adequate water stops of metal, rubber, or plastic shall be placed as shown on the plans. Where movement at the joint is provided for, the water stops shall be of a type permitting movement without injury. They shall be spliced, welded, or soldered to form continuous watertight joints.

907-804.03.18.6--Bearing Devices. Bearing plates, rockers, and other bearing devices shall be constructed according to details shown on the plans. Unless otherwise specified or set in plastic concrete, they shall be set in grout to insure uniform bearing. Structural steel and painting shall conform to the requirements of Sections 810 and 814. When specified, the material shall be galvanized in lieu of painting. The rockers or other expansion bearing devices shall be set, considering the temperature at the time of erection, so that the required position of the device is provided.

At all points of bearing contact, concrete members shall be separated from underlying members by dimensioned bearing pads or by methods and/or materials specified on the plans.

When not otherwise specifically provided, contact areas between concrete super-structures and substructures shall be separated by three layers of No. 15, Type I, roofing felt.

907-804.03.18.7--Friction Joints. Metal friction joints shall consist of plates as indicated on the plans and shall be securely anchored in correct position. All sliding surfaces shall be thoroughly coated with an approved graphite grease. Movement shall not be impeded by the concrete in which the plates are embedded.

907-804.03.18.8--Placing Anchor Bolts, Plates, Castings, Grillage, Conduits, Etc. All anchor bolts, plates, castings, grillage, conduits, etc. indicated on the plans to be placed in or on the concrete shall be placed, set, or embedded as indicated or as directed. These items of the construction shall be set in portland cement mortar as referenced in Subsection 714.11.5, except that anchor bolts may, as permitted by the Engineer, be built into the masonry, set in drilled holes, or placed as the concrete is being constructed by inserting encasing pipe or oiled wooden forms of sufficient size to allow for adjustment of the bolts. After removal of the pipe or forms, the space around the bolts shall be filled with portland cement mortar completely filling the holes. The bolt shall be set accurately and perpendicular to the plane of the seat.

Anchor bolts which are to be set in the masonry prior to the erection of the superstructure shall be carefully set to proper location and elevation with a template or by other suitable means.

When bed plates are set in mortar, no superstructure or other load shall be placed thereon until this mortar has been allowed to set for a period of at least 96 hours, subject to the restrictions for cold weather concreting in Subsection 907-804.03.16.1. The mortar shall be kept well moistened during this period.

Weep hole drains shall be installed in abutments and retaining walls, and roadway drains or scuppers shall be installed in the roadway slabs in accordance with the details shown on the plans.

Where backfill is to be made at weep holes or openings in the structure, sand or stone chimneys or French drains shall be constructed as specified and shall extend through the portion of the backfill to be drained. Except as otherwise provided, the sand, stone, or slag used in this construction shall meet the requirements of Subsection 704.04.

907-804.03.19--Finishing Concrete Surfaces.

804.03.19.1--Classes of Finishes. Surface finishes of exposed concrete surfaces shall be classified as follows:

- Class 1 - Ordinary Surface Finish
- Class 2 - Rubbed or spray Finish
- Class 3 - Tooled Finish
- Class 4 - Sand-Blast Finish
- Class 5 - Wirebrush or Scrubbed Finish
- Class 6 - Floated Surface Finish

907-804.03.19.2--Class 1, Ordinary Surface Finish. Immediately following the removal of forms, all fins and irregular projections shall be removed from all surfaces except from those which are not to be exposed or not to be waterproofed. On all surfaces, the cavities produced by form ties and all other holes, honeycomb spots, broken corners or edges, and other defects shall be thoroughly cleaned, and after having been kept saturated with water for at least three hours shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportions used in the class of the concrete being finished. Mortar used in pointing shall be not more than one hour old. The mortar patches shall be cured as specified under Subsection 907-804.03.17. All

construction and expansion joints shall be left carefully tooled and free of mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges.

The resulting surfaces shall be true and uniform. All surfaces which cannot be repaired to the satisfaction of the Engineer shall be given a Class 2 rubbed finish.

907-804.03.19.3--Class 2, Rubbed or Spray Finish.

907-804.03.19.3.1--Rubbed Finish. After removal of forms, the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as its condition will permit. Immediately before starting this work, the concrete shall be kept thoroughly saturated with water for at least three hours. Surfaces shall be rubbed with a medium course Carborundum stone using a small amount of mortar on its face. The mortar shall be composed of cement and sand mixed in the proportions used in the concrete being finished. Rubbing shall be continued until all form marks, projections, and irregularities have been removed, all voids are filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this time.

After all concrete above the surface being treated has been cast, the final finish shall be obtained by rubbing with a fine Carborundum stone and water. This rubbing shall continue until the entire surface is of a smooth texture and uniform color.

After the final rubbing is completed and the surface has dried, it shall be rubbed with burlap to remove loose powder and objectionable marks.

907-804.03.19.3.2--Spray Finish. Prior to the spray finish, the concrete shall be given a Class 1 finish in accordance with Subsection 907-804.03.19.2, supplemented if necessary with a grout meeting the requirements of Subsection 714.11 with fine aggregate modified to require 100 percent passing the No. 16 Sieve.

Grout shall be applied with burlap pads or float sponges, and as soon as the grout has dried the surface shall be brushed to remove all loose grout and the surface left smooth and free of air holes. Surfaces to be sprayed shall be free of efflorescence, flaking coatings, dirt, oil, and other foreign substances. Prior to application of the spray finish, the surfaces shall be free of moisture, as determined by sight and touch, and in a condition consistent with the manufacturer's published recommendations.

The spray finish material shall meet the requirements of Subsection 714.12 and shall be listed on of Approved Sources of Materials. The spray finish shall be applied with heavy duty spray equipment capable of maintaining a constant pressure as necessary for proper application. The material shall be applied as recommended by the manufacturer except the rate of application shall not be less than one gallon per 50 square feet of surface area without prior written approval of the Engineer.

The completed finish shall be tightly bonded to the structure and present a uniform appearance and texture equal to or better than a rubbed finish. If necessary, additional coats shall be sprayed to produce the desired surface texture and uniformity. Upon failure to adhere positively to the

structure without chipping or cracking or to attain the desired surface appearance, the coatings shall be completely removed and the surface given a rubbed finish in accordance with 907-804.03.19.3.1, or other approved methods shall be used to obtain the desired surface finish to the satisfaction of the Engineer without additional cost to the State.

907-804.03.19.4--Classes 3, 4, and 5 Finishes. If required, specifications for these finishes will be contained in the special provisions.

907-804.03.19.5--Class 6, Floated Surface Finish. After the concrete has been deposited in place, it shall be consolidated and the surface shall be struck off by means of a strike board and floated with a wooden or cork float. An edging tool shall be used on edges and expansion joints. The surface shall not vary more than 1/8 inch under a 10-foot straightedge. The surface shall have a granular or matte texture which will not be slick when wet.

907-804.03.19.6--Required Finishes for Various Surfaces.

907-804.03.19.6.1--General. Unless otherwise specified, the top surface of sidewalks, the top horizontal surfaces of footings, and top slabs of box bridges, box culverts, or other structures shall be given a Class 6 finish. All formed concrete surfaces shall be given a Class 1 finish, except on surfaces which are completely enclosed, such as the inside surfaces of cells of box girders, the removal of fins and form marks and the rubbing of mortared surfaces to a uniform color will not be required.

In reference to finishing, exposed surfaces are surfaces or faces which may be seen after all backfill has been placed. Exposed surfaces requiring a Class 2 finish shall be finished at least one foot below the ground line or the low water elevation, whichever is higher.

The Class 2 finish shall be made upon a Class 1 finish. After the removal of forms the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as the condition of the concrete will permit.

Bridge floors shall be finished in accordance with Subsection 907-804.03.19.7.

907-804.03.19.6.2--Finishing Formed Concrete Surfaces of Box Bridges, Box Culverts, Pipe Headwalls, and Minor Structures. The exposed surfaces of wing walls and parapets of box bridges and box culverts to be used as vehicular or pedestrian underpasses shall be given a Class 2 finish. Exposed surfaces of other box culverts or box bridges, pipe culvert headwalls, and other minor structures shall be given a Class 1 finish unless otherwise indicated on the plans.

The exposed surfaces of retaining walls including copings and parapets shall receive a Class 2 finish.

907-804.03.19.6.3--Finishing Formed Concrete Surface of Bridges. All formed concrete bridge surfaces which are exposed shall have a Class 1 or 2 finish as set forth herein unless designated otherwise on the plans.

Bridges with designated surfaces for Class 2 finish are classified as follows:

- Group A - Bridges over highways, roads and streets.
- Group B - Bridges over waterways and railroads.
- Group BB - Twin or adjacent bridges of Group B category.

When a Group B or BB bridge also spans a highway, road or street, exposed concrete surfaces shall be finished in accordance with Group A requirements.

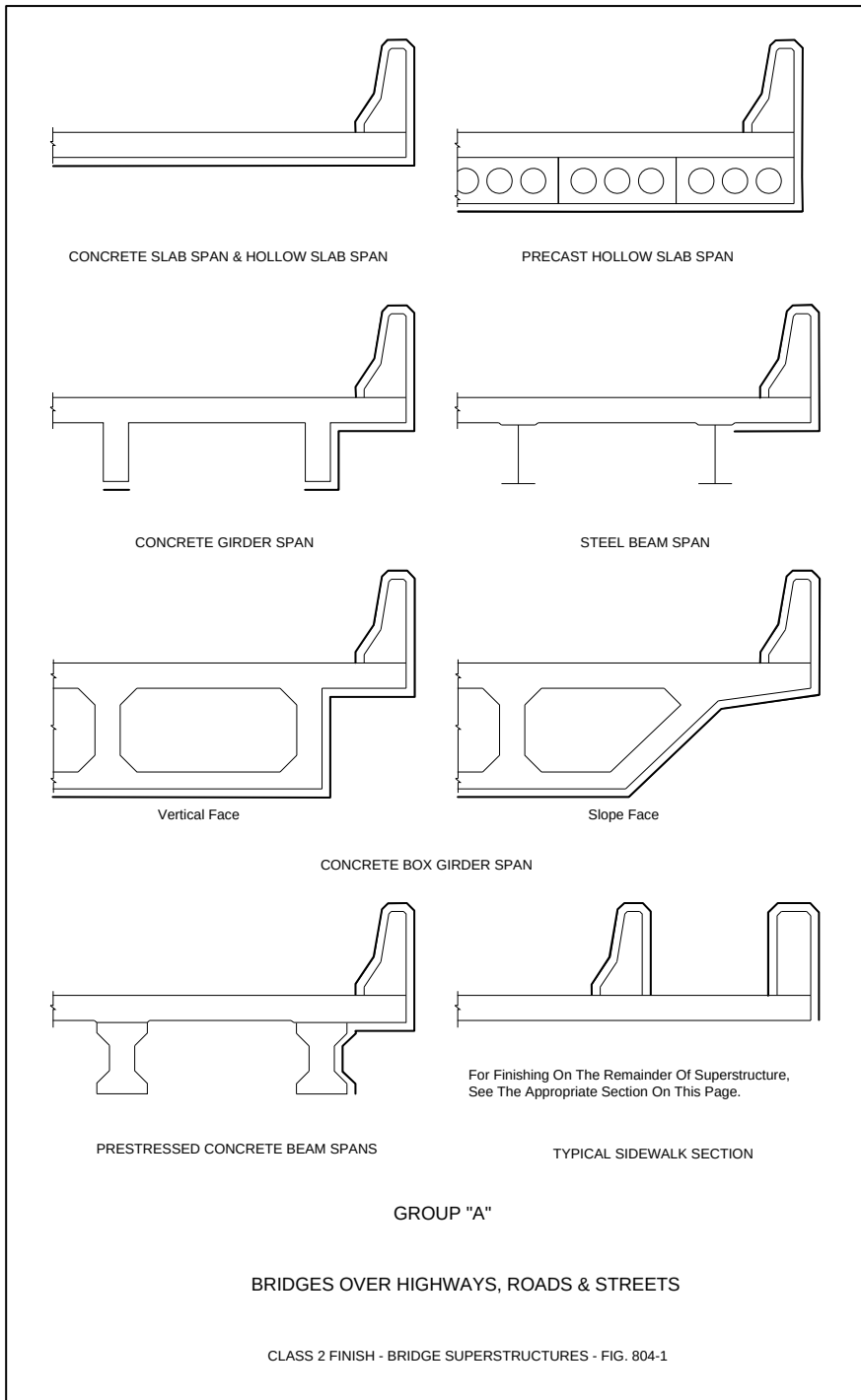
(A) Superstructures. Concrete surfaces to be given a Class 2 finish shall be the exposed surfaces of wings and rails and other exposed surfaces indicated by a double line in Figures 804-1, 804-2, and 804-3.

When a Group B or BB also spans a highway, road or street, the superstructure of spans over and extending one span in each direction beyond the lower level highway, road or street shall be given a Class 2 finish as shown for Group A.

(B) Substructures. Concrete surfaces to be given a Class 2 finish are as follows:

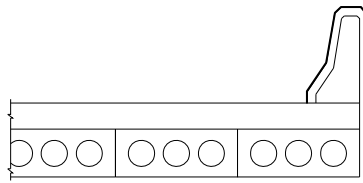
Group A. Exposed surfaces of abutments, end bents, end bent posts, wing walls, railing, retaining walls, parapets, copings, piers, columns, piles, caps, struts or walls between columns or piles, encasement of steel piles, arch rings and spandrel walls.

Group B and BB. Exposed surfaces of abutments, wing walls, end bent posts, railing, retaining walls, parapets and copings.

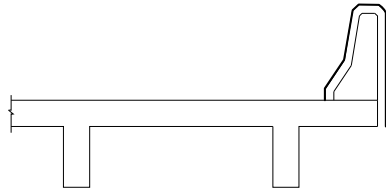




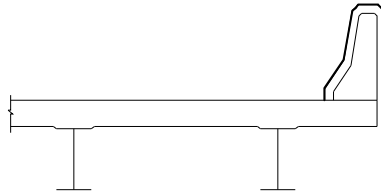
CONCRETE SLAB SPAN & HOLLOW SLAB SPAN



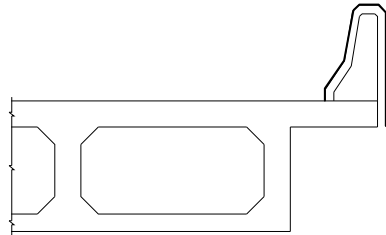
PRECAST HOLLOW SLAB SPAN



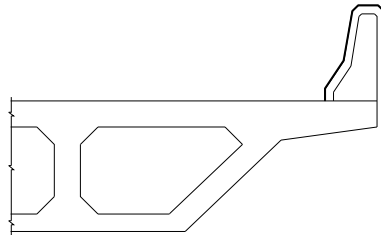
CONCRETE GIRDER SPAN



STEEL BEAM SPAN

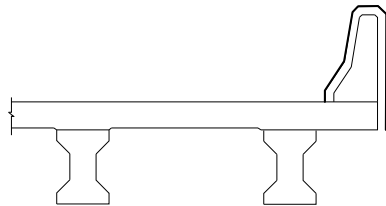


Vertical Face

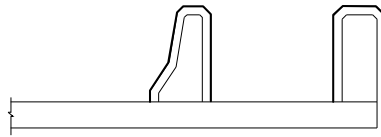


Slope Face

CONCRETE BOX GIRDER SPAN



PRESTRESSED CONCRETE BEAM SPANS

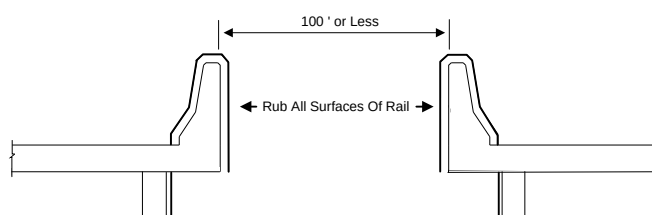


For Finishing On The Remainder Of Superstructure,
See The Appropriate Section On This Page.

TYPICAL SIDEWALK SECTION

GROUP "B"

BRIDGES OVER WATERWAYS AND BRIDGES OVER RAILROAD TRACKS



GROUP "B B" - ADJACENT BRIDGES

GROUP "B B"

TWIN or DUAL BRIDGES

CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-3

907-804.03.19.7--Finishing Bridge Decks.

907-804.03.19.7.1--General. Concrete bridge decks shall be struck off and finished by the method(s) designated on the plans.

In the event a method is not designated, the Contractor may use either the longitudinal or transverse method subject to the requirements contained in these specifications.

Except when indicated otherwise on the plans, the finish of the bridge deck shall be either a belt finish, a broom finish, or one of the following drag methods: pan, double pan, burlap, or pan and burlap. Manual finishing of the bridge deck shall be performed only in areas inaccessible by the finishing equipment mounted to the strike-off screed, but shall not hinder the requirements for curing in accordance with Subsection 907-804.03.17.1. The surface texture specified and surface requirements shall be in accordance with the applicable requirements of Subsections 501.03.17 and 501.03.18 modified only as the Engineer deems necessary for bridge deck construction operations.

At no time shall water on the surface of the concrete from bleeding, fogging, curing, or other sources be worked into the concrete or used as an aid for finishing.

Regardless of the method of finishing selected, requirements for curing per Subsection 907-804.03.17 shall be completed within the specified time limits. If the requirements in Subsection 907-804.03.17 are not completed within the specific time limits, the Contractor shall cease operations, revise his operations up to and including acquiring new or additional equipment or additional personnel in order to satisfy the requirements in Subsection 907-804.03.17, and, on approval from the Engineer, resume operations

907-804.03.19.7.2--Longitudinal Method. The longitudinal method may be used for repairs to bridge decks or bridge widening projects. For bridge widening projects, curing in accordance with Subsections 907-804.03.17 shall be completed within 30 minutes of initial strike-off for bridges without skew and within 35 minutes of initial strike-off for bridges with skew.

The longitudinal method requires that the strike-off screed be supported on accurately graded and supported bulkheads or templates placed across the full width at the end(s) of the pour. Before the concrete is placed, approved fixed templates or wooden bulkheads of not less than 1¼-inch lumber shall be placed perpendicular to the centerline of the roadway, or in the case of skew bridges at the angle of skew. At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed to assure the specified clearance to the reinforcing steel. The upper surface of the template or bulkheads shall be accurately set to conform to the required grade and crown.

Special attention shall be given to the gutter lines where the strike-off screed cannot reach. The gutters shall be finished by hand and tested with the straight edge. Floor drains shall be set lower than the finished gutter line and finished over. After initial set, the concrete shall be dished out and finished around the drains to form an outlet.

After the concrete has been deposited and rough graded, it shall be struck off by means of a strike-off screed resting on the bulkheads or fixed templates. The strike-off screed shall be of a type satisfactory to the Engineer and shall have sufficient strength to retain its shape under all working conditions. The final surface shall comply with the applicable requirements of Subsections 501.03.17.6 and 501.03.18, and unless otherwise specified in the contract, the final finish under this method shall be the belt finish.

In general, the overall strike-off screed should be trussed, with bracing heavy enough to support the weight of a man without deflecting, and should be adjustable for camber and correction of sag.

The strike-off screed will ride on the bulkheads or fixed templates at the ends of the section being finished. Care shall be taken to see that the bulkhead or fixed template elevations are accurately set since the entire span surface will be controlled by them. The manipulation of the screed shall be such that neither end is raised from the bulkheads or templates during the process.

The concrete shall be struck off by beginning at one curb and proceeding entirely across the span. A slight excess of concrete shall be kept in front of the cutting edge at all times. This operation shall be repeated at least three times. In each case, the strike-off screed shall be picked up and carried back to the point of beginning. No backward strokes will be allowed. The strike-off screed shall be moved along the bulkheads or fixed templates with a combined longitudinal and transverse motion. This operation may be manual or mechanical. Standing or walking in the fresh concrete ahead of the strike-off screed will not be permitted.

907-804.03.19.7.3--Transverse Method. The transverse method requires that the screeding equipment be supported on accurately graded and supported rails placed beyond the gutter lines and parallel with the centerline of the bridge.

The machine shall be so constructed and operated as to produce a bridge deck of uniform density with minimum manipulation of the fresh concrete and achieved in the shortest possible time. Manual transverse methods of screeding will not be permitted.

The finishing machine shall be supported on vertically adjustable rails set a sufficient distance from the gutter line to allow free movement of the screed from gutter line to gutter line. Satisfactory means of load distribution with minimum rail deflection shall be provided. The screed rails for a deck pour shall be completely in place for the full length of the pour and shall be firmly secured prior to placing concrete. The screed rails shall be adjusted as necessary to compensate for settlement and deflection occurring during the screeding operations. Supports for the screed rail shall be located directly over slab overhang support brackets as referenced in Subsection 907-804.03.14.1.

At least one dry run shall be made the length of each pour with a "tell-tale" device attached to the screed carriage to assure the specified clearance to the reinforcing steel.

The screed shall be equipped with a metal cutting edge or other approved mechanical means for accurately fine grading the plastic concrete to the required grade and surface smoothness and shall be supported by a bridging structure sufficiently rigid and heavy to perform operations

satisfactorily on concrete of minimum slump without vibration, distortion, and wrecking of forms. The screed shall be mechanically actuated to deliver the screeding action and for travel in a longitudinal direction at a uniform rate along the bridge deck.

The screed shall complete sufficient passes to strike off all of the excess concrete with ample mortar along the entire leading edge to assure filling of low spots. Care shall be taken to remove all objectionable material from the gutters where final hand finishing will be required.

The selection of the transverse method may require the Contractor to furnish bridge deck concrete which contains an approved water-reducing set-retarding admixture in the quantities approved by the Engineer at no additional cost to the State. See Subsection 713.02 for more information.

Other finishing requirements shall be in accordance with the general requirements in Subsection 907-804.03.19.7.1 and as specified on the plans.

907-804.03.19.7.4--Acceptance Procedure for Bridge Deck Smoothness. After the bridge decks and bridge end slabs are completed and preferably before the construction of the bridge railing, they shall be tested for ride quality using a Contractor furnished profilograph. Profile Index Values shall be determined in accordance with Department SOPs and these specifications. The profilograph shall meet the requirements of Subsection 907-804.03.19.7.5. Profiles will be obtained in the wheel paths of the main thru lanes and, where conditions allow, in the wheel paths of any auxiliary lanes or tapers. Profile Index Values for bridge decks and bridge end slabs shall be obtained for all state roads with four lanes or more, on state roads three lanes or less where the current traffic count is 2000 ADT or higher, or as designated on the plans. Ride quality tests will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge end slab as possible and shall proceed forward across the remainder of the bridge end slab, across the bridge deck and continue across the next bridge end slab to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge end slab. Bridges and bridge end slabs not requiring a ride quality test must meet a 1/8 inch in 10-foot straightedge requirement in longitudinal and transverse directions. Bridges in horizontal curves having a radius of less than 1000 feet at the centerline and bridges within the superelevation transition of such curves are excluded from a test with the profilograph.

The Profile Index Value for bridge decks including the bridge end slabs shall be averaged for the left and right wheel path for each lane and where applicable, each auxiliary lane and taper, and shall not exceed 65 inches per mile for each lane. Auxiliary lanes, tapers, shoulders and other areas that are not checked with the profilograph, shall meet a 1/8 inch in 10-foot straightedge check made transversely and longitudinally across the deck or slab. In addition, individual bumps or depressions exceeding 0.3 of an inch, when measured from a chord length of 25 feet, shall be corrected and the surface shall meet a 1/8 inch in 10-foot straightedge check made transversely across the deck or slab.

Bridge decks and bridge end slabs not meeting the preceding requirements shall be corrected. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of grinding the bridge deck in accordance with this specification. All corrective work shall precede final surface texturing. After completion of final surface texturing, all surface areas

corrected by grinding shall be sealed with a nonstaining 40% minimum alkylalkoxysilane penetrating sealant applied per the manufacturer's directions.

In case the bridge end slabs are to be constructed on a future project, the bridge deck(s) alone shall be tested for ride quality using the acceptance procedure outlined above, except that the ride quality test will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge as possible and shall proceed forward across the bridge deck to a point where the front-most wheel of the profilograph reaches the far-most edge of the bridge.

Expansion joint installation shall be delayed and the joint temporarily bridged to facilitate operation of the profilograph and grinding equipment across the joint wherever feasible.

It shall be the Contractor's responsibility to schedule profilograph testing. The Contractor shall notify the Department at least five (5) days in advance of profilograph testing. The Contractor shall ensure that the area to be tested has been cleaned and cleared of all obstructions. Profilograph testing of bridge decks and bridge end slabs shall be performed by the Contractor under supervision of the Engineer. All profilograph testing shall be performed at no additional cost to the Department. The Contractor will be responsible for traffic control associated with this testing operation.

907-804.03.19.7.4.1--Grinding Bridge Decks.

907-804.03.19.7.4.1.1--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture portland cement concrete pavement with diamond blades. The effective wheel base of the machine shall not be less than 12.0 feet. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 3.0 feet forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least 3.0 feet wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at cracks, joints, or other locations.

907-804.03.19.7.4.1.2--Grinding. The grinding areas will be determined by the Contractor and approved by the Engineer. The Contractor shall develop and submit to the Engineer for approval a Grinding Plan. The Contractor shall allow up to 45 days for the Department to review the Plan prior to starting any grinding operations. This plan shall include as a minimum:

- 1) Name of the project superintendent in responsible charge of the grinding operation.
- 2) List and description of all equipment to be used.
- 3) Maximum depth of each pass allowed by the grinding equipment.
- 4) Maximum width of each pass allowed by the grinding equipment.
- 5) Details of a sequence of the grinding operation.
- 6) Complete data from Profilograph runs, based on a 0.3 inch bump height, for each wheel path over the entire bridge including bridge end slabs, which shall include profile index,

bump locations (in stations), bump heights and proposed final cross-slopes. When a computerized profilograph is used, a complete printout of the profile including the header information for each wheel path will be required.

- 7) Data showing reinforcing steel clearance in all areas to be ground.
- 8) A detailed drawing of the deck showing areas to be ground with station numbers and grinding depths clearly indicated.
- 9) A description of grinding in areas where drains are in conflict with grind areas.
- 10) Details of any changes in deck drainage, anticipated ponding, etc.

The Engineer will evaluate the grinding plan for conformance with the plans and specifications, after which the Engineer will notify the Contractor of any additional information required and/or changes that may be needed. Any part of the plan that is unacceptable will be rejected and the Contractor shall submit changes for reevaluation. All approvals given by the Engineer shall be subject to trial and satisfactory performance in the field, and shall not relieve the Contractor of the responsibility to satisfactorily complete the work.

The construction operation shall be scheduled and proceed in a manner that produces a uniform finished surface. Grinding will be accomplished in a manner that eliminates joint or crack faults while providing positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane. Auxiliary or ramp lane grinding shall transition as required from the mainline edge to provide positive drainage and acceptable riding surface.

The operation shall result in a finished surface that conforms as close as possible to the typical cross-section and the requirements specified in Subsection 907-804.03.19.7.4.1.3.

The Contractor shall establish positive means for removal of grinding residue. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities.

907-804.03.19.7.4.1.3--Final Surface Texture. The grinding process shall produce a finish surface that is as close as possible to grade and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall be approximately 1/16 inch higher than the bottoms of the grooves with approximately 53 to 57 evenly spaced grooves per foot. Grinding chip thickness shall be a minimum of 0.080 inches thick.

The finished bridge decks and bridge end slabs shall be retested for riding quality using a Contractor furnished profilograph meeting the requirements of Subsection 907-804.03.19.7.5. The finished results shall meet the following conditions:

- (a) Individual bumps or depressions shall not exceed 0.3 inches when measured from a chord length of 25 feet.
- (b) The final index value for the bridge deck and bridge end slabs shall be an average of both the right and left wheel paths of each lane and shall not exceed 65 inches per mile.

The final profilogram will be furnished to the Engineer for informational purposes.

907-804.03.19.7.5--Profilograph Requirements. The smoothness of the bridge deck will be determined by using a California Profilograph to produce a profilogram (profile trace) at each designated location. The surface shall be tested and corrected to a smoothness index as described herein with the exception of those locations or specific projects that are excluded from a smoothness test with the profilograph.

The profilograph, furnished and operated by the Contractor under supervision of the Engineer, shall consist of a frame at least 25 feet in length supported upon multiple wheels having no common axle. The wheels shall be arranged in a staggered pattern so that no two wheels will simultaneously cross the same bump. A profile is to be recorded from the vertical movement of a sensing mechanism. This profile is in reference to the mean elevation of the contact points established by the support wheels. The sensing mechanism, located at the mid-frame, may consist of a single bicycle-type wheel or a dual-wheel assembly consisting of either a bicycle-type (pneumatic tire) or solid rubber tire vertical sensing wheel and a separate bicycle-type (pneumatic tire) longitudinal sensing wheel. The wheel(s) shall be of such circumference(s) to produce a profilogram recorded on a scale of one (1) inch equal to 25 feet longitudinally and one (1) inch equal to one (1) inch (full scale) vertically. Motive power may be provided manually or by the use of a propulsion unit attached to the center assembly. In operation, the profilograph shall be moved longitudinally along the pavement at a speed no greater than 3 MPH so as to reduce bounce as much as possible. The testing equipment and procedure shall comply with the requirements of Department SOP.

The Contractor may elect to use a computerized version of the profilograph in lieu of the standard profilograph. If the computerized version of the profilograph is used, it shall meet the requirements of Subsection 907-804.03.19.7.5.1.

907-804.03.19.7.5.1--Computerized Profilograph.

907-804.03.19.7.5.1.1--General The computerized profilograph, furnished and operated by the Contractor under the supervision of the Engineer, shall be equipped with an on-board computer capable of meeting the following conditions.

Vertical displacement shall be sampled every three (3) inches or less along the bridge deck. The profile data shall be bandpass filtered in the computer to remove all spatial wavelengths shorter than two (2) feet. This shall be accomplished by a third order, low pass Butterworth filter. The resulting band limited profile will then be computer analyzed according to the California Profilograph reduction process to produce the required inches per mile index. This shall be accomplished by fitting a linear regression line to the length of bridge. This corresponds to the perfect placement of the blanking band bar by a human trace reducer. Scallop above and below the blanking band are then detected and totaled according to the California protocol. Bump/Dip analysis shall take place according to the California Profilograph reduction process.

The computerized profilograph shall be capable of producing a plot of the profile and a printout which will give the following data: Stations every twenty five (25) feet, bump/dip height and bump/dip length of specification (3/10 of an inch and 25 feet respectively), the blanking band width, date of measurement, total profile index in inches per mile for the measurement, total length

of the measurement, and the raw inches for each segment.

907-804.03.19.7.5.1.2--Mechanical Requirements. The profilograph shall consist of a frame twenty five (25) feet long supported at each end by multiple wheels. The frame shall be constructed to be easily dismantled for transporting. The profilograph shall be constructed from aluminum, stainless steel and chromed parts. The end support wheels shall be arranged in a staggered pattern such that no two wheels cross a transverse joint at the same time. The relative smoothness shall be measured by the vertical movement of an eight (8) inch or larger diameter sensing wheel at the midpoint of the 25-foot frame. The horizontal distance shall be measured by a twenty (20) inch or larger diameter pneumatic wheel. This profile shall be the mean elevation referenced to the twelve points of contact with the pavement established by the support wheels. Recorded graphical trace of the profile shall be on a scale of one inch equals one inch (full scale) vertical motion of the sensing wheel and one inch equals 25 feet horizontal motion of the profilograph.

907-804.03.19.7.5.1.3--Computer Requirements. The computer shall have the ability to produce output on sight for verification. The computerized output shall indicate the profile index for each specified section of bridge deck. Variable low and high pass third-order Butterworth filtering options shall be available. The printout shall be capable of showing station marks automatically on the output. Blanking band positioning for each specified section of the bridge deck shall be placed according to the least squares fit line of the collected data. Variable bump and dip tests shall be available to show “must correct” locations on the printout. The computer must have the ability to display on screen “must correct” conditions and alert the user with an audible warning when a “must correct” location has been located. The computer must have the ability to store profile data for later reanalysis. The measurement program must be menu driven and PC compatible. User selected options, identification, calibration factors, and time and date stamps shall be printed at the top of each printed report for verification. The control software must be upgradeable. A power source shall be included for each profilograph and be capable of supplying all power needs for a full days testing.

907-804.03.19.8--Finishing Horizontal Surfaces of Footings or Top Slabs of Box Bridges, Culverts, or Other Structures. The finishing of horizontal surfaces of footing or top slabs of box bridges, culverts, or other structures shall be achieved by placing an excess of material in the form and removing or striking off the excess with a template, forcing the coarse aggregate below the mortar surface. After the concrete has been struck off the surface shall be given a Class 6 finish.

907-804.03.19.9--Finishing Exposed Surfaces of Sidewalks. After the concrete has been deposited in place it shall be consolidated and the exposed surface shall be given a Class 6 finish. An edging tool of the required radius shall be used on all edges and at all expansion joints. The surface shall have a granular texture which will not be slick when wet.

Sidewalk surfaces shall be laid out in blocks with an approved grooving tool as shown on the plans or as directed.

907-804.03.20--Opening Bridges.

907-804.03.20.1--Public Traffic. Unless otherwise specified, concrete bridge decks shall be closed to public highway traffic for a period of at least 21 days after placing concrete.

907-804.03.20.2--Construction Traffic. Unless otherwise specified, concrete bridge decks shall be closed to construction traffic for the time required for curing in Subsection 907-804.03.17 and the minimum required compressive strength for the concrete placed is obtained.

907-804.03.21--Final Cleanup. Upon completion of the work all equipment, surplus materials, forms, and waste material shall be removed, the bridge cleaned, and the site of the work given a final cleanup.

907-804.03.22--Precast-Prestressed Concrete Bridge Members.

907-804.03.22.1--General. All installations and plants for the manufacture of precast-prestressed bridge members shall be PCI (Precast / Prestressed Concrete Institute) Certified. Bridge members manufactured in plants or installations not so approved will not be accepted for use in the work. The Contractor or other manufacturer shall employ a technician skilled in the adopted system of prestressing to supervise the manufacturing operations. This technician shall be certified according to the guidelines of this specification. The Contractor shall develop and implement a Quality Control Program as per Division I of PCI Quality Control Manual, 4th Edition. The Quality Control Program shall be submitted to the District Materials Engineer for approval.

907-804.03.22.2--Stressing Requirements. The jacks for stressing shall be equipped with accurate calibrated gauges for registering the jacking pressure. Means shall be provided for measuring elongation of strands to at least the nearest 1/16 inch.

Prior to beginning work, the Contractor or manufacturer shall have all jacks to be used, together with their gauges, calibrated by an approved laboratory. All jacks and gauges shall have an accuracy of reading within two percent. The testing agency shall furnish the Engineer a statement certifying that the jacks and gauges meet this requirement. During the progress of the work, if a gauge appears to be giving erratic results or if the gauge pressure and elongations indicate materially differing stresses, recalibration will be required.

Calibration of jacks and gauges shall be repeated at intervals deemed necessary by the Engineer. These intervals for calibration shall not exceed one year.

Shop drawings of prestressed beams, including an erection plan, shall be submitted in duplicate to the Bridge Engineer for approval prior to manufacture of members.

907-804.03.22.2.1--Methods. Plans for the particular bridge members will show prestressing by one of the following methods:

(A) Pretensioning. The prestressing strands are stressed initially. After the concrete is placed, cured, and has attained the compressive strength shown on the plans, the stress is transferred to the member. The method used for pretensions shall be in accordance to Division V of PCI Quality Control Manual, 4th Edition.

(B) Posttensioning. The posttensioning tendons are installed in voids or ducts and are stressed and anchored after development of the compressive strength specified on the plans. The voids or ducts are then pressure grouted.

(C) Combined Method. Part of the reinforcing is pretensioned and part posttensioned. Under this method all applicable requirements for the two methods specified shall apply to the respective stressing elements being used.

907-804.03.22.2.2--Alternate Details for Prestressed Members. In the event that the Contractor / Manufacturer desires to use materials or methods that differ in any respect from those shown on the plans or described in these specifications, the Contractor shall submit for approval full plan details on acceptable tracings suitable for reproduction and specifications which shall become the property of the Department. In order for alternate materials and/or methods to be considered, they will be required to comply fully with the following:

- A. Provisions equal to those stipulated in these specifications.
- B. Current AASHTO Specifications.
- C. Recommendations of materials manufacturer.
- D. Camber tolerance of beams and spans shown on plans.

Note: Alternate materials and methods will not be authorized on Federal-Aid Projects.

The Engineer shall be the sole judge as to the adequacy and propriety of any variation of materials or methods.

907-804.03.22.2.3--Stressing Procedure.

(A) General. Stressing shall be performed by suitable jacks working against unyielding anchorages and capable of maintaining the required stress for an indefinite period without movement or yielding. Strands may be stressed singularly or in a group.

The tension to be applied to each strand shall be as shown on the plans. The tension shall be measured by both jacking gauges and elongations in the strands and the result shall check within close limits.

It is anticipated that there will possibly be a difference in indicated tension between jack pressure and elongation of about five (5) percent. In this event, the discrepancy shall be placed on the side of slight overstress rather than understress.

In the event of an apparent discrepancy between gauge pressure and elongation of as much as five (5) percent, the entire operation shall be carefully checked, and the source of error determined before proceeding further.

Elongation is to be measured after the strands have been suitably anchored, and all possible slippage at the anchorages has been eliminated.

In all stressing operations, the stressing force shall be kept as nearly symmetrical about the vertical axis of the member as practicable.

(B) Pretensioning. All strands to be prestressed shall be brought to a uniform initial tension prior to being given their full pretensioning. This uniform initial tension of approximately 1000 to 2000 pounds shall be measured by suitable means such as a dynamometer so that its value can be used as a check against elongation computed and measured.

After the initial tensioning, the strand or group shall be stressed until the required elongation and jacking pressure is within the limits specified.

When the strands are stressed in accordance with the plan requirements and these specifications and all other reinforcing is in place, the concrete shall be placed in the prepared forms.

Strand stress shall be maintained until the concrete between anchorages has attained the required compressive strength as determined by cylinder tests, after which the strands shall be cut off flush with the ends of column members, and cut as shown on the plans for beams, girders, etc. Strands shall be cut or released in such a manner that eccentricity of prestress will be kept to a minimum and no damage to the member will result. The strand cutting pattern shall be as shown on the plans or as approved by the Bridge Engineer.

(C) Posttensioning. For all posttensioning tendons/bars the anchor plates shall set exactly normal in all directions to the axis of the tendon/bar. Parallel wire anchorage cones shall be recessed within the beams. Tensioning shall not take place until the concrete has reached the compressive strength shown on the plans.

Elongation and jacking pressures shall make appropriate allowance for all possible slippage or relaxation of the anchorage. Posttensioning tendons/bars shall be stressed in the order and manner shown on the plans.

The units shall be tensioned until the required elongations and jacking pressures are attained and reconciled within the limits specified in Subsection 907-804.03.22.2.3(A) with such overstresses as approved by the Engineer for anchorage relaxation.

Independent references shall be established adjacent to each anchorage to indicate any yielding or slippage that may occur between the time of initial stressing and final release of the strands.

Straight tendons/bars may be tensioned from one end. Unless otherwise specified, curved tendons shall be stressed by jacking from both ends of the tendons.

(D) Combined Method. In the event that girders are manufactured with part of the reinforcement pretensioned and part posttensioned, the applicable portions of the requirements listed herein shall apply to each type.

907-804.03.22.3--Manufacture.

907-804.03.22.3.1--Forms. The forms used for precast-prestressed bridge members shall meet the requirements of Division II of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.2--Placing and Fastening Steel. Placing and fastening of all steel used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 4th Edition.

907-804.03.22.3.3--Holes for Prestressing Tendons/Bars. Holes provided in girders for prestressing tendons/bars shall be formed by means of inflatable rubber tubing, flexible metal conduit, metal tubing, or other approved means.

907-804.03.22.4--Placing and Curing Concrete.

907-804.03.22.4.1--Placing. The placing of concrete shall meet the applicable requirements of Division III of PCI Quality Control Manual, 4th Edition.

907-804.03.22.4.2--Curing. Initial and accelerated curing of all members shall meet the applicable requirements of Division IV of PCI Quality Control Manual, 4th Edition except for the following listed requirements.

The source of heat for accelerated cure shall be steam. Calibrated thermocouples shall be implanted into the concrete members to monitor areas expected to have maximum and minimum heat. Curing methods and procedures listed in the prestress producer's PCI Quality System Manual shall be approved by the Department before their implementation.

907-804.03.22.4.3--Removal of Side Forms. Side forms may be removed after the concrete has attained sufficient strength to maintain a true section. In order to obtain "sufficient strength", it may be necessary to cure members for 12 hours or more as prescribed in Subsection 907-804.03.22.4.2, or to attain a minimum compressive strength of 1000 psi.

If high-early-strength concrete is obtained by use of low slump (0 to 1.5-inch) concrete, vacuum process, or other approved methods, side forms may be removed earlier; however, approval of the methods and revision from normal schedules will be made only after inspections by the District Materials Engineer and Materials Division have determined that satisfactory results will be attained by the methods and schedules proposed.

907-804.03.22.4.4--Grouting. The holes through posttensioned members in which the tendons are installed shall be equipped with approved grouting vents. All prestressing tendons to be bonded shall be free of dirt, loose rust, grease, or other deleterious substances. Before grouting, the ducts shall be free of water, dirt, and other foreign substances. The ducts shall be blown out with compressed air until no water comes through the ducts. For long members with draped tendons an open tap at low points may be necessary. After completion of stressing, the annular space between sides of tendon and sides of hole shall be grouted as set in the following paragraphs.

With the grouting vent open at one end of the core hole, grout shall be applied continuously under moderate pressure at the other end until all entrapped air is forced out through the open grout vent, as evidenced by a steady stream of grout at the vent. Whereupon, the open vent shall be closed under pressure. The grouting pressure shall be gradually increased to a refusal of at least 75 psi and held at this pressure for approximately 10 seconds, and the vent shall then be closed under this pressure.

Portland cement grout shall consist of a mixture of:

- 1 part Type 1 portland cement
- 1/4 part fly ash
- 3/4 part washed sand *
- 4 to 6 gallons of water per bag of cement.

* all passing No. 16 sieve and not more than 5% retained on No. 30

Water-reducing admixtures, subject to approval by the Engineer, shall be used in accordance with the manufacturer's recommendations.

The grout shall be mixed in a mechanical mixer, shall have the consistency of heavy paint, and shall be kept agitated until placed.

Members shall not be moved before the grout has set, ordinarily at least 24 hours at 80°F or higher.

907-804.03.22.5--Finishing and Marking. Units shall be given a Class 1 finish at the plant and shall be given a Class 2 finish after erection when required.

Recesses in girders at end of diaphragm bars, holes left by form ties, and other surface irregularities shall be carefully cleaned and patched with an approved non-shrink commercial grout or a non-shrinkage mortar of the following composition:

- 1 part Type 1 portland cement
- 1 1/2 to 2 parts fine sand
- 1/2 to 3/4 ounces aluminum powder per bag of cement
- Approved admixture per Subsection 713.02.
- Sufficient water to produce a workable but rather stiff mix.

The units shall be clearly marked in accordance with Department's *Materials Division Inspection, Certification and Testing Manual*.

907-804.03.22.6--Handling, Storage, and Installation. Posttensioned members may be handled immediately after completion of stressing and grout has set. Pretensioned members may be handled immediately after release of tensioning. In either case, the members shall have developed a minimum compressive strength of 4000 psi prior to handling. In the event stressing is not done in a continuous operation, members shall not be handled before they are sufficiently stressed, as determined by the Engineer, to sustain all forces and bending moments due to handling. In the

handling, storage, and transporting of beams or girders, they shall be maintained in an upright position (position as cast) at all times and shall be picked up from points within distance from beam ends equal to beam depth or at pick-up points designated on the plans. Disregard of this requirement and dropping of units may be cause for rejection, whether or not injury to the unit is apparent. Piles shall be picked up and loaded for shipment at points shown by the suspension diagram on the plans. Extreme care shall be used in handling and storing piles to prevent damage. The dropping of a pile may be cause for rejection of same, whether or not there is apparent injury to the member.

Care shall be exercised during the storage, hoisting, and handling of precast units to prevent damage. Damaged units shall be replaced by the Contractor at no additional costs to the State.

When members are stacked for storage, each layer shall be supported at or near the pick-up points. Supports shall be carefully placed in a vertical line in order that the weight of any member will not stress an underlying member. To prevent damage in moving members it is suggested that rigid supports be covered with a cushion of wood or other resilient material.

Members shall not be transported until at least one day after the concrete has reached a compressive strength of 5000 psi or greater strength when shown on the plans.

Piles used in salt water shall not be driven until concrete is seven days old, and air-entrained concrete shall be used in such piles.

After prestressed concrete voided slab units are set, doweled and bolted in their final position the keyways and dowel holes shall be filled with an approved non-shrink grout. Traffic shall not be permitted on the spans for 24 hours after grouting, and heavy construction equipment exceeding 15 tons will not be permitted on the spans for a period of 72 hours after grouting.

Adjacent slab units that mismatch more than one-fourth inch shall be adjusted prior to grouting of the shear keys. The maximum deviation from cross-section and grade (exclusive of camber) at any point shall not exceed one-fourth inch; and when the surface is checked with a ten-foot straightedge applied both parallel and perpendicular to the centerline, the variance shall not exceed one-fourth inch.

In addition to the requirements set out in this section, the applicable requirements of Section 803 shall apply.

907-804.03.22.7--Tolerances for Accepting Precast Prestressed Concrete. Member shall meet the dimension tolerances set by Division VII of PCI Quality Control Manual, 4th Edition.

907-804.03.22.8--Testing of Materials. Concrete and aggregate testing shall meet the requirements of Division VI of PCI Quality Control Manual, 4th Edition, except that the concrete mixture design shall meet the requirements of Subsection 907-804.02.10. Also, in addition to concrete compressive tests samples made for detensioning and 28-day strength, test samples shall be made and tested in order to prove compliance to the requirements of Subsection 907-804.03.22.6 for handling and shipping prestressed members. Compressive strength test cylinders

for detensioning, handling and shipping shall receive the same type curing as the prestressed members for which they represent. Compressive strength samples shall be made each day for each prestress casting bed.

907-804.03.22.9--Testing Personnel. Technicians testing portland cement concrete used in the production of precast-prestressed members shall be PCI Quality Control Technician/Inspector Certified. Each producer of precast-prestressed members shall have at least one PCI Level II certified technician on site during production for Department projects.

907-804.03.22.10--Documentation. The Precast-Prestressed Producer for each precast-prestressed concrete bridge member shall maintain documentation as set forth in the Department's *Materials Division Inspection, Certification and Testing Manual*. Testing and inspection record forms shall be approved by the Central Laboratory and as a minimum contain information listed in Division VI of PCI Quality Control Manual, 4th Edition.

907-804.03.22.11--Use in the Work. Before any precast-prestressed member is incorporated into the work, documentation as described in Subsection 907-804.03.22.10 is required along with visual inspection of the member at the bridge construction site. Project Office personnel as per the Department's *Materials Division Inspection, Certification and Testing Manual* will make visual inspection of the precast-prestressed member at the bridge construction site.

907-804.04--Method of Measurement. Concrete, complete and accepted, will be measured in cubic yards. The concrete volume will be computed from the neat dimensions shown on the plans, except for such variations as may be ordered in writing by the Engineer. The quantity of concrete involved in fillets, scorings, and chamfers one square inch or less in cross-sectional area will be neglected. Deductions shall be made for the following:

- (1) The volume of structural steel, including steel piling encased in concrete.
- (2) The volume of timber piles encased in concrete, assuming the volume to be 0.80 cubic foot per linear foot of pile.
- (3) The volume of concrete piles encased in concrete.

No deduction will be made for the volume of concrete displaced by steel reinforcement, floor drains, or expansion joint material that is one inch or less in width normal to the centerline of the joint. Where railing is bid as a separate item, that portion of the railing above the top of the curb, above the surface of the sidewalk, or above the bridge roadway, as the case may be, will not be included in the measurement of concrete, but will be measured as railing. Massive pylons or posts which are to be excepted from payment for railing and are intended to be measured for as concrete will be so noted on the plans.

When shown on the plans or directed by the Engineer, concrete placed as a seal for cofferdams will be measured by the cubic yard actually in place, except that no measurement will be made of seal concrete placed outside of an area bounded by vertical planes 18 inches outside the neat lines of the footing as shown on the plans or as directed and parallel thereto.

Reinforcing steel will be measured and paid for in pounds as set out in Section 805.

Unless otherwise specified, structural steel will be measured and paid for as set out in Section 810.

Excavation for bridges will be measured and paid for as in Section 801.

Piling will be measured and paid for as set out in Sections 802 and 803.

Railing will be measured and paid for as set out in Section 813.

Prestressed concrete beams and plank will be measured by the linear foot.

Prestressed concrete voided slab units, interior and exterior with railing, and precast concrete caps, intermediate and end cap with winged abutment wall, of the size and type specified will be measured by the unit complete in place and accepted. Railing, winged abutment walls, grout, tie rods, nuts, washers, bearing pads and other appurtenances will not be measured for separate payment.

907-804.05--Basis of Payment. Concrete will be paid for at the contract unit price per cubic yard for the class or classes specified, complete in place. Prestressed concrete beams and plank will be paid for at the contract unit per linear foot of specified size and type.

Prestressed concrete voided slab units and precast caps will be paid for at the contract unit price per each for the specified types and sizes, complete in place and accepted; which price shall be full compensation for furnishing, hauling and erecting the members; including all prestressing reinforcement and other reinforcement in the members. Payment at the contract unit prices bid shall be full compensation for furnishing all materials, equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-804-A: Bridge Concrete, Class ____	- per cubic yard
907-804-B: Box Bridge Concrete, Class ____	- per cubic yard
907-804-C: <u>Length</u> Prestressed Concrete Beam, Type ____	- per linear foot
907-804-D: <u>Length</u> Prestressed Concrete Plank	- per linear foot
907-804-E: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Interior	- per each
907-804-F: <u>Length</u> Prestressed Concrete Voided Slab, <u>Size</u> Exterior	- per each
907-804-G: <u>Length</u> Precast Concrete Caps, End Unit with Wall	- per each
907-804-H: <u>Length</u> Precast Concrete Caps, Intermediate Unit	- per each

SECTION 905 PROPOSAL

Date October 20, 2016

SRSP 7207-06(004) LPA/106877-401000

Forrest County, Mississippi

Sirs: The following proposal is made on behalf of Fairley Construction Services, Inc.
of 828 Hwy 11, Petal MS 39465
for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of:

Neel-Schaffer, Inc.

The Specifications are the current Standard Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

Attached hereto is a certified check, cashier's check or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law).

INSTRUCTION TO BIDDERS: Alternate and Optional Items on Bid Schedule.

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.
2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.
3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 102.06 prior to or at the time of execution of the contract.
4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

SECTION 905 PROPOSAL (Continued)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of the total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bonds within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the Local Public Agency as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. <u>1</u>	DATED <u>10/17/2016</u>	ADDENDUM NO. _____	DATED _____
ADDENDUM NO. _____	DATED _____	ADDENDUM NO. _____	DATED _____

1. Replace 905-2 in the Special Provision, Proposal and Contract Documents with attached 905-2.
2. Replace sheets 905-3 and 905-4 in the Special Provision, Proposal and Contract Documents with attached Sheets 905-3 and 905-4.

TOTAL ADDENDA: 1
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE October 20, 2016

Fairley Construction Services, Inc.
Contractor

BY [Signature]
Signature

TITLE President

ADDRESS 828 Hwy 11, Petal MS 39465

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of Mississippi and the names, titles and business addresses of the executives are as follows:

<u>Stephen M. Fairley</u>	<u>828 Hwy 11, Petal MS 39465</u>
President	Address

<u>Wesley T. Fairley</u>	<u>828 Hwy 11, Petal MS 39465</u>
Secretary	Address

<u>Wesley T. Fairley</u>	<u>828 Hwy 11, Petal MS 39465</u>
Treasurer	Address

The following is my (our) itemized proposal.

Revised 11/2008

SECTION 905 PROPOSAL (Bid Sheet No. 3-5)

PROJECT NUMBER: SRSP-7207-00(004) LPA / 106877-401000

COUNTY: FORREST

PROJECT DESCRIPTION: SAFE ROUTES TO SCHOOL - HAWKINS SIDEWALK PROJECT

I (We) agree to complete the entire project within the specified contract time.

***** SPECIAL NOTICE TO BIDDERS *****

BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED.

BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATE LOCATED AT THE END OF THE BID SHEETS IS SIGNED.

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
201-C001	1	ACRE	RANDOM CLEARING AND GRUBBING	6,500.00	6,500.00
202-A001	1	LS	REMOVAL OF OBSTRUCTIONS	XXXX	5,500.00
202-B035	307	SQ. YD.	REMOVAL OF CONCRETE SIDEWALK	11.70	3,591.90
202-B076	150	LIN. FT.	REMOVAL OF TRAFFIC STRIPE	3.52	528.00
202-B077	8	EACH	REMOVAL OF TREES 6" AND GREATER	350.00	2,800.00
202-B078	255	SQ. YD.	REMOVAL OF PAVEMENT, ALL TYPES AND DEPTHS	10.00	2,550.00
202-B093	110	LIN. FT.	REMOVAL OF CURB & GUTTER, ALL TYPES	10.00	1,100.00
203-A003	5	CU. YD.	UNCLASSIFIED EXCAVATION, FM, AH	350.00	1,750.00
203-EX017	265	CU. YD.	BORROW EXCAVATION, AH, FME, CLASS B9	12.00	3,180.00
203-G003	265	CU. YD.	EXCESS EXCAVATION, FM, AH	12.50	3,312.50
211-B001	160	CU. YD.	TOPSOIL FOR SLOPE TREATMENT, CONTRACTOR FURNISHED	22.00	3,520.00
907-213-A001	1	TON	AGRICULTURAL LIMESTONE	300.00	300.00
907-216-B001	1,420	SQ. YD.	SOLID SODDING, CENTIPEDE	7.50	10,650.00
219-A001	225	KGAL	WATERING	\$20.00	\$4,500.00
220-A001	1	ACRE	INSECT PEST CONTROL	200.00	200.00
234-A001	400	LIN. FT.	TEMPORARY SILT FENCE	4.00	1,600.00
907-237-A003	100	LIN. FT.	WATTLES, 20"	8.00	800.00
907-246-A002	100	EACH	SANDBAGS	10.00	1,000.00
907-601-B003	2	CU. YD.	CLASS "B" STRUCTURAL CONCRETE, MINOR STRUCTURES	1,620.00	3,240.00
602-A001	300	LBS.	REINFORCING STEEL	3.00	900.00
603-CB014	1	EACH	15" REINFORCED CONCRETE END SECTION	750.00	750.00
603-CA129	36	LIN. FT.	15" REINFORCED CONCRETE PIPE, CLASS III, RUBBER TYPE GASKETS	40.00	1,440.00
608-A001	1,595	SQ. YD.	CONCRETE SIDEWALK, WITHOUT REINFORCEMENT	38.00	60,610.00
609-B001	80	LF	CONCRETE CURB HEADER	16.00	1,280.00

BID SCHEDULE					
PAY ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM TOTAL
614-B002	156	SQ. YD.	CONCRETE DRIVEWAY, WITH REINFORCEMENT, 6-INCH THICKNESS	63.00	9,828.00
907-618-A001	1	LS	MAINTENANCE OF TRAFFIC	XXXX	6,500.00
907-618-B001	1	SQ. FT.	ADDITIONAL CONSTRUCTION SIGNS	100.00	100.00
620-A001	1	LS	MOBILIZATION	XXXX	20,570.00
630-A001	146	SQ. FT.	STANDARD ROADSIDE SIGNS, SHEET ALUMINUM, 0.080" THICKNESS	27.00	3,942.00
630-C004	224	LIN. FT.	STEEL U-SECTION POSTS, 3.0 TO 3.5 LB/FT	15.00	3,360.00
907-242-PP102	555	SQ. FT.	BOARDWALK PER PLANS	38.00	21,090.00
907-684-PP002	2	EACH	SCHOOL FLASHER ASSEMBLY, PER PLANS	7,300.00	14,600.00
907-626-E003	1000	LIN. FT.	6" THERMOPLASTIC TRAFFIC STRIPE, CONTINUOUS YELLOW	.88	880.00
907-626-Z003	2672	LIN. FT.	THERMOPLASTIC LEGEND, WHITE 6" EQUIVALENT	2.35	6,279.20
907-626-H005	24	SQ. FT.	THERMOPLASTIC LEGEND, WHITE	29.37	704.88
TOTAL BID					209,456.48

SECTION 905 PROPOSAL (Bid Sheet No. 5-5)

PROJECT NUMBER: SRSP-7207-00(004) LPA / 106877-401000

COUNTY: FORREST

PROJECT DESCRIPTION: SAFE ROUTES TO SCHOOL – HAWKINS SIDEWALK PROJECT

COMPLETE ITEM NOS. 1, 2 AND/OR 3 AS APPROPRIATE, SEE NOTICE TO BIDDERS NO. 5266 AND SUPPLEMENT.

1. I/We agree that no less than 3 percent shall be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE and WBE).
2. Classification of Bidder: Small Business (DBE) ☐ Small Business (WBE) ☐
3. A joint venture with a Small Business (DBE/WBE): YES ☐

*** SIGNATURE STATEMENT***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFY THAT THE FIGURES SHOWN THERIN CONSTITUTE THEIR OFFICIAL BID.



BIDDER'S SIGNATURE

**Certification with regard to the Performance of Previous
Contracts or Subcontracts subject to the Equal Opportunity
Clause and the filing of Required Reports**

The Bidder X, proposed Subcontractor _____, hereby certifies that he has X, has not _____, participated in a previous contract or subcontract subject to the Equal Opportunity Clause, as required by Executive Orders 10925, 11114, or 11246, and that he has _____, has not X, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Fairley Construction Services, Inc.
(COMPANY)
BY [Signature]
President
(TITLE)

DATE: October 20, 2016

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and Subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime Contractors and Subcontractors who have participated in a previous contract or subcontract subject to the Executive orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such Contractors submit a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION**NON-COLLUSION AFFIDAVIT**

(Execute in duplicate)

State of Mississippi

County of ForrestI, Stephen M. Fairley,
(Name of person signing certification)individually, and in my capacity as President of
(Title)Fairley Construction Services, Inc. do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

Fairley Construction Services, Inc., Bidder
(Name of Firm, Partnership, or Corporation)on Project No. SRSP 7207-06(004) LPA/106877-401000in Forrest County(ies), Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in (b) above; and
- d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently \$25,000) which are excluded from the certification requirements.

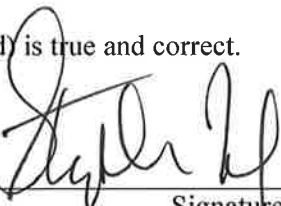
The bidder further certifies, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000. The bidder shall include the language of the certification in all subcontracts exceeding \$100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on October 20, 2016



Signature

(11/23/92F)

LOCAL PUBLIC AGENCY (LPA)

SECTION 902

CONTRACT FOR _____
LOCATED IN THE COUNTY OF _____
STATE OF MISSISSIPPI,

This contract entered into by and between the Local Public Agency _____
_____ (hereinafter "LPA") on one hand, and the undersigned contractor, on the other
witnesseth;

That, in consideration of the payment by the LPA of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the LPA.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the LPA or their authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Mississippi Department of Transportation or Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

Manager, WIN Job Center nearest the project

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the ____ day of _____, 20____.

Contractor(s)

By _____

Title _____

Signed and sealed in the presence of:
(Names and address of witnesses)

By _____

LPA Official

LPA Clerk

Award authorized by the LPA in session on the ____ day of _____, 20____, as recorded _____

LOCAL PUBLIC AGENCY (LPA)

S E C T I O N 9 0 3
PERFORMANCE AND PAYMENT BOND

CONTRACT BOND FOR _____

LOCATED IN THE COUNTY OF _____

STATE OF MISSISSIPPI,

Know all men by these presents: that we, _____
(Contractor)

(hereinafter "Principal"), a _____

residing at _____ in the State of _____

and _____
(Surety)

residing at _____ in the State of _____

authorized to do business in the State of Mississippi, under the laws thereof, as surety, are held and firmly bound

unto the Local Public Agency _____, (hereinafter

"LPA"), in the sum of _____

(\$ _____) Dollars, lawful money of the United States of America, to be

paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or

assigns jointly and severally by these presents.

The conditions of this bond are such, that whereas the said Principal, has (have) entered into a contract with the

LPA, bearing the date of _____ day of _____ A.D. _____ hereto annexed, for the

construction of certain project(s) in the State of Mississippi as mentioned in said contract in accordance with the

Contract Documents therefor, on file in the offices of the LPA.

Now therefore, if the above bounden Principal in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said LPA from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the LPA at the instance of any officer of the LPA authorized in such cases, for double any amount in money or property, the LPA may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the

LOCAL PUBLIC AGENCY (LPA)

Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes, licenses, assessments, contributions, damages, any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the LPA Official, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

_____	_____
(Contractors) Principal	Surety
By _____	By _____
	(Signature) Attorney in Fact
	Address: _____

Title _____	_____
(Contractor's Seal)	(Printed) Mississippi Agent

	(Signature) Mississippi Agent
	Address: _____

	(Surety Seal)

	Mississippi Insurance ID Number

Date 10/8/15

**Guidance for Federal Spending Transparency:
Subaward and Executive Compensation Data
Reporting Requirements for FFATA Implementation**

Summary

1. Prime awardees and sub awardees of Federal financial assistance must report executive compensation data if they meet the statutory reporting thresholds. For the Federal-aid Highway Program, this means that the State, and any subawardees of Federal-aid funds through the State, is subject to the executive compensation reporting requirement.

- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

Background

Beginning October 1, 2010, guidance directs compliance with the Transparency Act to report prime and first-tier subaward data. Federal agencies and prime awardees will report to ensure disclosure of Federal contract and grant subaward and executive compensation data.

The Transparency Act requires information disclosure concerning entities receiving Federal financial assistance through Federal awards such as Federal contracts, sub-contracts, grants, and sub-grants.

Specifically, the Transparency Act's section 2(b)(1) requires the Office of Management and Budget ("OMB") to ensure the establishment of a publicly available website that contains the following information about each Federal award:

- name of the entity receiving the award;
- amount of the award;
- information on the award including transaction type, funding agency, the North American Industry Classification System code or Catalog of Federal Domestic Assistance number, program source, award title descriptive of the purpose of each funding action;

- location of the entity receiving the award and primary location of performance under the award, including city, State, congressional district, and country;
- unique identifier of the entity receiving the award and the parent entity of the recipient, should the entity be owned by another entity; and
- names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1).

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** ***FOR THEIR SIGNATURE*** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

DISADVANTAGED BUSINESS ENTERPRISE LIST

PROJECT NUMBER :

NAME OF DBE FIRM:

☐ RACE CONSCIOUS ☐ RACE NEUTRAL

COUNTY:

CITY :

A	B	C
REFERENCE NUMBER OF ITEMS	PERCENT WORK SUBCONTRACTED , (SEE NOTE 4 & 5 BELOW)	VALUE OF ITEM (SUBCONTRACTED , MANUFACTURED OR SUPPLIED)
TOTAL		
PER CENT OF TOTAL BID		

*** I ACKNOWLEDGE AND COMMIT TO THE ITEMS AND PRICES STATED ABOVE. ***

SIGNATURE OF DBE

SIGNATURE OF PRIME

DATE APPROVED: _____

Prime Contractor Firm Name

APPROVED BY: _____

LPA Project Director Name (Printed)

Submitted By Name

LPA Project Director (Signature)

TITLE

I AGREE TO SUBCONTRACT OR PURCHASE MATERIAL FROM THE DBE FIRM LISTED ABOVE AND I MAKE THIS COMMITMENT WITH THE UNDERSTANDING THAT IF I FAIL FOR GOOD REASON TO FULFILL THIS COMMITMENT I HAVE LISTED I WILL FULFILL THE TERMS OF MY CONTRACT AS LONG AS I REACH OR EXCEED THE CONTRACT GOAL OF _____ %.

INSTRUCTIONS :

1. SUBMIT THIS FORM TO THE **LPA Project Director** **FOR THEIR SIGNATURE** NO LATER THAN THE THIRD (3) CALENDER DAY AFTER THE OPENING OF THE BIDS.
2. 60 % CREDIT IS ALLOWED TOWARD THE DBE GOAL FOR SUPPLIERS.
3. THE ACTUAL SUBCONTRACT AGREEMENT MUST EQUAL OR EXCEED THE DOLLAR AMOUNT SHOWN IN COLUMN " C " .
4. IF THE DBE FIRM PERFORMS " ALL OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM ENTER 100 % IN COLUMN " B " .
5. IF THE DBE FIRM PERFORMS " A PORTION OF THE WORK " PERTAINING TO A SUBCONTRACTED ITEM THE PERCENTAGE IS CALCULATED BASED ON THE TOTAL VALUE OF THE ITEM AND ENTERED IN COLUMN " B " . A BREAKDOWN OF THE COST MUST ACCOMPANY THIS SITUATION.

LPA PROJECT

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: SPSP 7207-00(004) LPA/106 877-40600
County: Forrest

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

Firm Name: Traffic Control Products Co., Inc.
Contact Name/Title: Wendy Garner
Firm Mailing Address: P.O. Box 820, Brandon MS 39043
Phone Number: 601-989-2415
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm


SUBMITTED BY (Signature)
Fairley Construction Services, Inc.
FIRM NAME

Submit this form to the LPA as a part of your bid package. If this form is not signed and included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504.

Please make copies of this form when needed and also add those copies to the bid package.

LPA PROJECT

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: SRSP 7207-00(004) LPA/106 877-401000
County: Forrest

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

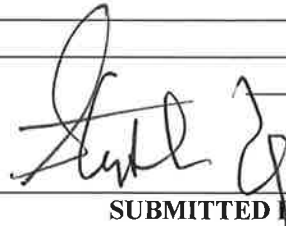
Firm Name: Traffic Control Products Co., Inc.
Contact Name/Title: Wendy Garner
Firm Mailing Address: P.O. Box 820, Brandon MS 39043
Phone Number: 601-939-2415
☒ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address: _____
Phone Number: _____
☐ DBE Firm ☐ Non-DBE Firm



SUBMITTED BY (Signature)

FIRM NAME

Submit this form to the LPA as a part of your bid package. If this form is not signed and included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504.

Please make copies of this form when needed and also add those copies to the bid package.



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-57

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Authorize 98 West waste disposal contract

Title: Authorize Mayor to execute a six-month contract with 98 West, LLC, for delivery of acceptable waste to its landfill or transfer station at a fee of \$7 per yard for approved Class I rubbish and \$3 per yard for 100% vegetative loads.

Type: Action Item

Drafter: Teresa Evans,
Administrative Assistant

In Control: City Council

Reference:

Attachments: Waste Disposal Agreement 98 Waste

File Created: 11/14/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

WASTE DISPOSAL AGREEMENT

Customer Name: City of Hattiesburg ("CITY")

Supplier Name: 98 Waste LLC ("98 WASTE")

Mailing Address: 406 Hemphill St

Hattiesburg, MS 39401

Supplier's Landfill or Transfer Station Contact Name: Johnny Nelson

Phone Number: 601 543 3057

Contract Effective Date: 11/21/2016 Term of Contract: 6 months

Acceptable Waste Types: Class I Rubbish approved debris

Unit of Measure for Billing: Cubic Yards

Disposal Fee: \$7.00/yd for approved Class I rubbish: \$3.00/yd for 100% vegetative loads

Invoice Period: Monthly

All Payments Are Due Within 45 Days after Receipt of Invoice

1. Delivery of Acceptable Waste. CITY may deliver any Class I approved waste, and, 98 Waste agrees to accept all Acceptable Waste (as defined below) at its landfill or transfer station indicated on the first page of this Contract (the "Landfill/Transfer Station"). Notwithstanding anything to the contrary set forth in this Contract, CITY is not under any obligation to deliver any minimum quantity of Acceptable Waste during any time period.

2. Delivery Procedures; Operation of the Landfill/Transfer Station.

- (a) Acceptance of Acceptable Waste. "Acceptable Waste" means the waste types approved by the Mississippi Department of Environmental Quality for Class I Rubbish Disposal facilities.
- (b) Compliance with Applicable Laws. CITY shall bring waste to the Landfill/Transfer Station in compliance with all then-applicable federal, state and local laws, regulations, ordinances, rules, permits, licenses, and governmental orders or directives (collectively "Applicable Laws"). 98 WASTE shall manage the Landfill/Transfer Station and dispose of all waste delivered by CITY in accordance with all Applicable Laws.
- (c) Title to Waste. Title to, and risk of loss and responsibility for, Acceptable Waste delivered to the Landfill/Transfer Station shall pass at the time such Acceptable Waste is removed from the delivery vehicle at the Landfill/Transfer Station. Title to Unacceptable Waste shall remain with CITY or its customer and shall never be deemed to pass to 98 WASTE.

3. Term. Unless sooner terminated pursuant to Section 8, this Contract shall commence as of the Contract Effective Date and shall remain in full force and effect for the period specified on the first page of this Contract.

4. Disposal Fees and Payments.

- (a) Fees. CITY shall pay 98 WASTE a disposal fee (the "Disposal Fee") for all Acceptable Waste delivered to and accepted at the Landfill/Transfer Station as set forth on the first page of this Contract. In addition to the Disposal Fee, CITY shall pay such other fees as specified above, if any. Notwithstanding anything to the contrary set forth in this Agreement or otherwise, the Disposal Fee, as well as any other amounts CITY is to pay to 98 WASTE hereunder, shall not be increased without CITY's prior written consent.
- (b) Payment. 98 WASTE shall transmit an itemized invoice to CITY, in form and substance satisfactory to CITY, of all Disposal Fees and other charges under this Contract on a periodic basis as indicated above.

CITY shall pay all invoices within the time period indicated above. If CITY does not make payment by such date, CITY shall pay a late payment fee in an amount equal to the lesser of (i) the greater of \$5 per month or 1.5% per month on the amount past due or (ii) the maximum amount allowed by Applicable Law.

- (c) **Taxes and Other Charges; Cost Increases.** In addition to the Disposal Fee, CITY shall pay all federal, state, local or other taxes, fees (including host fees, but excluding any taxes on the income or real property of 98 WASTE), surcharges or similar charges related to the disposal of Acceptable Waste that are imposed by law, ordinance, regulation, agreement with a governmental authority, governmental audit or otherwise (collectively, "Taxes/Host Fees/Charges"). The initial amount of Taxes/Host Fees/Charges, if any, is set forth on the first page of this Contract, but is subject to change from time to time pursuant to the preceding sentence and by execution of a written amendment to this Contract by both Parties.

6. **Changes and Amendments to Contract.** This Contract may be changed at any time but only upon the mutual agreement of the Parties and the execution of a written amendment signed by the authorized representatives of both Parties.

7. **Unacceptable Waste.**

- (a) **Delivery of Unacceptable Waste.** CITY agrees that it shall not deliver any Unacceptable Waste to 98 WASTE's Landfill/Transfer Station. If CITY delivers waste that contains both Acceptable Waste and Unacceptable Waste, the entire delivery shall constitute Unacceptable Waste if the Unacceptable Waste cannot be separated from the Acceptable Waste through the reasonable efforts of 98 WASTE, with the cost of such separation to be paid by CITY. 98 WASTE shall have the right to inspect any of CITY's trucks to determine whether the waste delivered is Acceptable Waste or Unacceptable Waste.
- (b) **Rejection of Unacceptable Waste.** If CITY delivers Unacceptable Waste to 98 WASTE's Landfill/Transfer Station, 98 WASTE may, in its sole discretion: (i) reject such Unacceptable Waste at CITY's expense; or (ii) if 98 WASTE does not discover such Unacceptable Waste in time to reject such Unacceptable Waste, inform CITY by providing telephonic notice thereof and offering CITY a reasonable opportunity to remove and dispose of such Unacceptable Waste. If CITY elects to dispose of such Unacceptable Waste, it shall do so within such time period as 98 WASTE reasonably deems necessary or appropriate in connection with the operation of the Landfill/Transfer Station, including the preservation of the health and safety of its employees. If CITY chooses to not remove or properly dispose of such Unacceptable Waste, or, if, after electing to do so, CITY does not dispose of the Unacceptable Waste within a reasonable time period specified by 98 WASTE, 98 WASTE may dispose of such Unacceptable Waste at a location authorized to accept such Unacceptable Waste in accordance with all Applicable Laws, and, charge CITY the reasonable costs incurred due to removal and disposal of such Unacceptable Waste.
- (c) **Definition of Unacceptable Waste.** For the purposes of this Contract, "Unacceptable Waste" means: (i) any material that is not Acceptable Waste; and (ii) any material that by reason of its composition, characteristics or quantity is defined as a "hazardous material," "hazardous waste," "hazardous substance," "extremely hazardous waste," "restricted hazardous waste," "toxic substance," "toxic waste," "toxic pollutant," "contaminant," "pollutant," "infectious waste," "medical waste," "radioactive waste," or "sewage sludge" under any Applicable Law..

8. **Termination and Cancellation.** CITY may cancel this Contract at any time upon providing 98 WASTE with 30 days advance written notice. At such time, 98 WASTE shall submit final invoices to CITY and CITY shall pay 98 WASTE pursuant to this Contract for all charges and fees for all Acceptable Waste delivered to 98 WASTE's Landfill/Transfer Station. Thereafter neither party shall have any further obligation under this Contract other than for the provisions under Sections 9 and 10 of this Contract.

9. **Responsibilities for Employment Taxes, Personal Injuries and Damages.**

- (a) Each party shall be responsible for all employment taxes for its respective employees.
- (b) Each party hereto agrees to indemnify, defend and hold harmless the other party hereto, its officers, directors, employees, agents, affiliates, parent, subsidiaries, successors and assigns from and against any and all claims, counterclaims, suits, demands, actions, causes of action, damages, setoffs, liens,

attachments, judgments, debts, expenses or other liabilities of whatsoever kind or nature, to the extent caused by or resulting from (i) any negligence or willful misconduct of such party, its employees and agents in connection such party's performance under this Contract, or (ii) a breach by such party of any of the covenants, agreements, representations or warranties of such party set forth in this Contract.

- (c) Except as expressly stated in these standard terms, no indemnification obligations shall exist between CITY and 98 WASTE.

10. **General.**

- (a) **Independent Contractor.** Each party hereto shall perform their obligations under this Contract as independent contractors. Neither party hereto, nor any of its employees, agents or subcontractors, shall be, purport to be, or be deemed, the agent of the other party hereto.
- (b) **Assignment; Binding Effect.** Neither party hereto may assign this Contract without the other party's prior written consent; provided, however, either party hereto may, without the prior consent of the other party hereto, assign this Contract to a subsidiary of the assigning party or its parent company, or to a successor-in-interest in such party's business. This Contract shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assignees.
- (c) **Entire Agreement.** This Contract supersedes all prior agreements, written or oral, with respect to the subject matter of this Contract.
- (d) **Severability.** If any one or more of the provisions contained in this Contract is, for any reason, held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Contract, and all other provisions shall remain in full force and effect.
- (e) **Waiver.** No delay or omission by a party hereto in exercising any right under this Contract will operate as a waiver of that or any other right. A waiver or consent given by a party hereto on any occasion is effective only on that occasion and not any other.
- (f) **Excusable Delays.** Neither party hereto shall be liable for its failure to perform hereunder if performance is prevented by contingencies beyond its reasonable control, including, but not limited to, riots, war, fire, strikes, acts of God or changes in applicable law or regulations.
- (f) **Governing Law, Waiver of Jury Trial; Attorneys' Fees.** This Contract shall be governed by the laws of the State of Mississippi. By execution and delivery of this Contract, each of the parties hereto knowingly, voluntarily and irrevocably: (i) waives any right to trial by jury; and (ii) agrees that any dispute arising out of this Contract shall be decided by court trial without a jury. If any legal action or any other proceeding is brought for the enforcement of this Contract, or because of an alleged dispute, breach, default, or misrepresentation in connection with this Contract, the prevailing party shall be entitled to recover reasonable attorneys' fees and other costs incurred in that action or proceeding, in addition to any other relief to which it may be entitled.

[Signature Page To Follow]

IN WITNESS WHEREOF, the parties hereto have executed this Contract to be effective as of the date above.

BY: City of Hattiesburg
Department of Public Works

BY: 98 Waste , LLC

Signature

Signature

Date

Date

Larry Barnes / Director

Johnny Nelson

Printed Name

Printed Name

Title

Title



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-67

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Acknowledge receipt of request filed by Leonard Bu

Title: Acknowledge receipt of request filed by Leonard Busby, III, Capturion Network, LLC, to appeal the Planning Commission's recommendation for the petition filed by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 AND to request a Use Permit Upon Review for a "Digital Billboard" as provided in Article 5, Section 95.10(3.1)(3) for a proposed Digital Billboard located on a certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3); (Hattiesburg Planning Commission recommended to DENY on November 3, 2016); Set a public hearing before City Council at 4:00 p.m. on December 19, 2016, and authorize publication of Public Notice of Appeal Public Hearing.

Type: Action Item

Drafter: Ginger Maddox

In Control: City Council

Reference:

Attachments: November PC
Minutes (DRAFT), Appeal - 4041
Old Hwy 11 - 11-2-16 HPC

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information: Public Notice to set hearing to publish in Hattiesburg American on December 2, 2016 (17 days prior to December 19, 2016 hearing).

History of Legislative File

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
November 2, 2016**

The Hattiesburg Planning Commission did meet in a regular session on November 2, 2016 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Joseph White, Chairman, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Eric Martin
 Mark Miller
 Joseph White, Chairman

Commissioners Absent: Sandra Thompson
 Jessie Wilson

Also Present: Ginger Maddox, Planning Division Manager
 Melinda Green, Urban Development
 Armendia Esters, Planning Division

Chairman White declared the meeting of the Hattiesburg Planning Commission open and in session at 1:03 P.M.

INVOCATION

Commissioner White gave the invocation.

AGENDA REVIEW

There came the matter of the November 2016 Agenda. A request was made by Ginger Maddox, Planning Division Manager for a motion to remove Item E from the Agenda.

A request was made by Chairman White for a motion to approve the November 2016 Agenda with Item E removed from the Agenda. A motion was made to approve the November 2016 Agenda with Item E removed from the Agenda by Commissioner McMurtrey and seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
 Judy Corts
 Amy Hinton
 Peggy Horton, Secretary
 Linda McMurtrey, Vice-Chairman
 Mark Miller
 Eric Martin

Commissioners voting nay: None

Commissioners abstaining: None

MINUTES REVIEW

There came the matter of the October 5, 2016 Minutes. A request was made by Chairman White for a motion to approve the October 5, 2016 minutes. A motion was made by Commissioner Corts to approve the minutes and seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Jessie Wilson

Commissioners voting nay: None

Commissioners abstaining: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report was provided to the commission of monthly and YTD Permit information for October, 2016.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox, Planning Division Manager. Ms. Maddox reported that there will be a Special Call session of the City Council to review the proposed Land Development Code. The Special Call will take place on November 28, 2016 at 4:00pm in Council Chambers. The Mayor and City Council have declared the month of October Planning Month for the city of Hattiesburg. The declaration aligns with the National recognition of October as Community Development and Planning Month. All other Planning Commission items, from October, were approved.

CHAIRMAN'S REPORT

There came the matter of the Chairman's Report. There was none.

PUBLIC HEARING

Chairman White declared the Public Hearing open at 1:18 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Variance), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC , Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 95.10(3.1)(3) E which states spacing between Digital Billboards (Primary Structure) and Static Billboards are a minimum radius of 1,250 feet and instead allow a distance of one thousand, one hundred and fifty one (1,151) feet for a variance of ninety-nine (99) feet located on Hwy 98 for a proposed Digital Billboard located on a certain property located at 4041 Old

Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	Leonard Busby, III	P.O. Box 6439	Laurel, MS
<u>Opponents:</u>	Norman Beasley	2055 Oak Grove Road	Hattiesburg, MS

Mr. Beasley stated that a new static billboard has been recently permitted for the Hwy 98/Old Hwy 11 intersection which would further prohibit Mr. Busby from meeting the required 1,250 radius required of all digital billboards. Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the petition. Commissioner Miller made a motion to deny the petition because special conditions and circumstances do not exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would not deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do result from the actions of the applicant; and that granting the variance requested will confer on the applicant special privileges that are denied by the code to other lands, structures, or buildings in the same district.

Commissioners voting aye: Dick Conville
Amy Hinton
Peggy Horton, Secretary
Linda McMurtrey, Vice-Chairman
Mark Miller
Eric Martin

Commissioners voting nay: Judy Corts

Commissioners abstaining: None

There came the matter of Item B (Use Permit Upon Review), by Leonard Busby, III, Capturion Network, LLC, Applicant, on behalf of Mississippi Oil, LLC, Owner, remanded by the City Council on September 20, 2016, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a Use Permit Upon Review for a “Digital Billboard” as provided in Article 5, Section 95.10(3.1)(3) for certain property located at 4041 Old Hwy 11 (Latitude/Longitude: 31.314740, -89.411141) (Parcel 055D-16-035.000, PPIN 18771, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Craig Orr	P.O. Box 1289	Laurel, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Miller made a motion to deny the request because there is not public need for the proposed use, as opposed to the private interest of individual. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item C (Zoning Change), by Dustin Gatlin, Engineer, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to change the zoning classification for 2100 S. 28th Avenue Extension, 2206 S. 28th Avenue Extension, & 2208 S. 28th Avenue Extension (Parcel 2-039O-20-005.00, PPIN 27240, Parcel 2-039O-20-004.00, PPIN 27241, & Parcel 2-039O-20-003.00, PPIN 27242, respectively, Ward 5) from Article 4, Section 52, R-1A (Single-Family Residential) District to Section 62, B-5 (Regional Business) District.

	Name	Address	City/State
<u>Presented by:</u>	Dustin Gatlin	2203 Hardy Street	Hattiesburg, MS
	- Engineer, Walker Associates		
<u>Proponents:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
	- Forrest General Hospital		
<u>Opponents:</u>	Chad M. Sommers	125 Victoria Drive	Hattiesburg, MS
	Kendon Ellerman	108 Victoria Drive	Hattiesburg, MS

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because there is a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property. The motion was seconded by Commissioner Corts.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item D (Variance), by Phillip Perkins, Architect, on behalf of Doug Jones, COO, Forrest General Hospital, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.5.2. (E) which states a Build-to Zone on a primary street (Arlington Loop) shall meet a maximum setback of 20 feet and instead allow a setback of 82.14 feet for a variance of 62.14 feet for 301 S. 28th Avenue (Parcel 2-028N-07-241.00, PPIN 17799, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Douglas Jones	P.O. Box 16389	Hattiesburg, MS
<u>Proponents:</u>	Todd Jackson, ADP	One Convention Center Plaza	Hattiesburg, MS
<u>Opponents:</u>	None		

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item F (Variance), by John Anglin, Engineer, David Chunn, Owner, as required in the Comprehensive Zoning Ordinance No. 2330, as amended, to request a variance from Article 5, Section 89.08 which states the minimum distance from a curb cut to the property line may be twelve and one half (12.5) feet and instead allow six and eight tenths (6.8) feet for a variance of five and seven tenths (5.7) feet for certain property located at 6623 US Hwy 49 (Parcel 2-024M-31-016.00, PPIN 27492, Ward 1).

	Name	Address	City/State
<u>Presented by:</u>	John Anglin Joe McMurry	6652 US Hwy 98 101 Hickory Circle	Hattiesburg, MS Petal, MS
<u>Proponents:</u>	None		

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Linda McMurtrey, Vice-Chairman

Commissioners voting nay: Mark Miller

Commissioners abstaining: None

There came the matter of Item G (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 33% lot width along S. 30th Avenue for a variance of 42% lot width for certain property located at 3000 Hardy Street along S. 30th Avenue (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Corts made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item H (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.2 (B) which states a street facing façade height with a minimum of two (2) stories shall meet a 75% minimum overall lot width and instead allow 0% lot width along Hardy Street for a variance of 75% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner Conville made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; that literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

There came the matter of Item I (Variance), by Rob O. Tatum, Jr, Owner, as required in the Midtown Form-Based Code, to request a variance from Article 3, Section 3.15.1 (F) which

states a Build-to Zone on a primary street (Hardy Street) shall meet a 90% minimum overall lot width and instead allow 84% lot width for a variance of 6% lot width for certain property located at 3000 Hardy Street along Hardy Street (Parcel 028N-07-078.00, PPIN 20837; Parcel 028N-07-076.00, PPIN 20839, Ward 3).

	Name	Address	City/State
<u>Presented by:</u>	Rob Tatum	11 Parkway Blvd	Hattiesburg, MS

Proponents: None

Opponents: None

Chairman White declared the Public Hearing closed and the Business Meeting open to vote on the request. Commissioner McMurtrey made a motion to approve the request because special conditions and circumstances do exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district; That literal interpretation of the provisions of this Code would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Code; that the special conditions and circumstances do not result from the actions of the applicant; that granting the variance requested will not confer on the applicant any special privilege that is denied by this Code to other lands, structures, or buildings in the same district. The motion was seconded by Commissioner Horton.

Commissioners voting aye: Dick Conville
Judy Corts
Amy Hinton
Peggy Horton, Secretary
Eric Martin
Mark Miller

Commissioners voting nay: None

Commissioners abstaining: None

BUSINESS MEETING

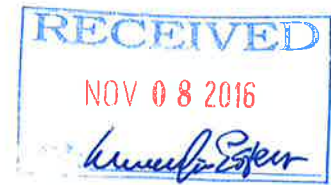
There being no further business, Commissioner [REDACTED] made a motion to adjourn the meeting. The motion was seconded at Commissioner [REDACTED].

Joe White, Chairman

Pattie Brantley, AICP, Director of Urban Development.



**BURSON ENTREKIN ORR
MITCHELL & LACEY, PA**



RICHARD O. BURSON
ROMNEY H. ENTREKIN ¹
CRAIG N. ORR
RYAN J. MITCHELL
P. GRAYSON LACEY, JR.
SHIRLEY M. MOORE ^{2,3}
BENJAMIN B. MORGAN
KATHERINE B. SUMRALL

¹ ALSO ADMITTED IN LOUISIANA

² ALSO ADMITTED IN TENNESSEE

³ ALSO ADMITTED IN ALABAMA

FILED

NOV 08 2016

November 8, 2016

BY Natasha Thomas
CITY CLERK
DEPUTY CLERK

Mr. Kermas Eaton
City Clerk
City of Hattiesburg
P. O. Box 1898
Hattiesburg, MS 39403-1898

VIA HAND-DELIVERY

**Re: Request to Appeal Planning Commission Recommendation
4041 Old Hwy 11, Hattiesburg, Mississippi 39401**

Dear Mr. Eaton:

Please find enclosed our *Request to Appeal Planning Commission Recommendation* regarding the above-mentioned address.

Should you need anything further, please do not hesitate to contact me.

Sincerely,
Burson Entrekin Orr Mitchell & Lacey, PA

Craig N. Orr

CNO/plw

Cc: Pattie Brantley, AICP Director, Department of Urban Development
Ginger Maddox, Planning Division Manager
All with enclosures

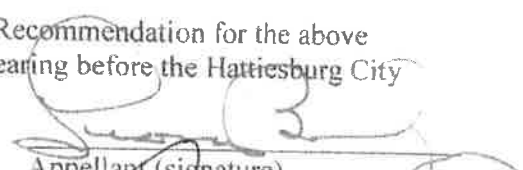


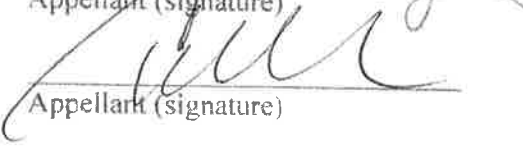
Send to:
Pattie Brantley, Director of Urban Development
Dept. of Urban Development
P.O. Box 1898
Hattiesburg, MS 39403
601.545.4591 or fax 601.545.1962

REQUEST TO APPEAL PLANNING COMMISSION RECOMMENDATION

Today's Date:	November 8, 2016
Planning Commission Meeting Date:	November 2, 2016
<i>(Appeals must be made within ten consecutive days of the recommendation)</i>	
Name of Property Owner/Petitioner:	Mr. Leonard Busby, III, Capturion Network, LLC
Name of Person Requesting Appeal Hearing:	Mr. Leonard Busby, III, Capturion Network, LLC
Mailing Address of Person Requesting Appeal Hearing:	P. O. Box 6439, Laurel, MS 39401
Address of Petitioned Property:	4041 Old HWY 11, Hattiesburg, MS 39401
Petitioner's Request of the Planning Commission:	Please see Attachment.
Planning Commission's Recommendation:	Approve ☐ or Deny ☒

I/We hereby APPEAL the Planning Commission Recommendation for the above referenced petition and request to hold a Public Hearing before the Hattiesburg City Council.


Appellant (signature)


Appellant (signature)

**ATTACHMENT TO REQUEST TO APPEAL PLANNING COMMISSION
RECOMMENDATION**

**MR. LEONARD BUSBY, III,
CAPTURION NETWORK, LLC**

PETITIONER

PETITIONER'S REQUEST OF THE PLANNING COMMISSION

Petitioner requests a hearing and reconsideration of the Planning Commission's decision to deny Petitioner's request for variance from Article 5, Section 95.10(3.1)(3)(e) despite grant of similar variances in the past. See attached: **Exhibit "A,"** Brown Bottling Company Variance Grant and **Exhibit "B,"** Thames Variance Grant. In further support, Petitioner would show that the two (2) subject signs are located on separate road frontages and do not advertise to the same vehicles. Finally, Petitioner is in the process attempting to procure evidence of other similar variance grants and reserves the right to submit the same at any hearing and/or reconsideration of this denial.

VI.-3 2012-0624

Approve or Deny the petition filed and represented by Keri Galey on behalf of Brown Media Group, owners, to vary from Section 95.10 (3.1) (3E-4) which states that the spacing between Digital Billboards and Static Billboards in a Regional Business Corridors shall be a minimum of 1,000 linear feet measured radially for Billboard-Digital New, and instead allow a distance of six hundred and twenty-five feet (625'), for a variance of three hundred seventy-five feet (375'), for certain property located at 6817 U. S. Highway 49 (Parcel 53-1064-37, PPIN 27588, Ward 1); Hattiesburg Planning Commission recommended to DENY on March 7, 2012.

Attachments: Brown Bottling mins
item a

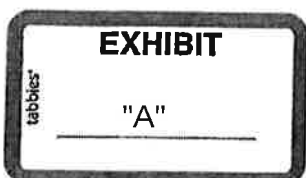
A MOTION was made by Vice President Ware and seconded by Council Member Carroll to Approve the petition filed and represented by Keri Galey on behalf of Brown Media Group, owners, to vary from Section 95.10 (3.1) (3E-4) which states that the spacing between Digital Billboards and Static Billboards in a Regional Business Corridors shall be a minimum of 1,000 linear feet measured radially for Billboard-Digital New, and instead allow a distance of six hundred and twenty-five feet (625'), for a variance of three hundred seventy-five feet (375'), for certain property located at 6817 U. S. Highway 49 (Parcel 53-1064-37, PPIN 27588, Ward 1); Hattiesburg Planning Commission recommended to DENY on March 7, 2012.

Council member Carroll asked that the comments and explanation from the Agenda Review be included in the official record, so that if the sign at Sonic (owned by Lamar) becomes a digital board there will not be a need for a use permit, since it currently is permitted.

Council Vice President Ware asked that the record reflect that the petitioner [Brown Media Group] was already in the process of trying to put up a billboard and realized the City was [working] on a digital billboard ordinance. He said the rationale for granting the variance is that the petitioner was already in the process of obtaining the billboard.

Council member Delgado said she is not able to vote for this item. She said [the City] went through quite a bit and had tremendous input in completing this ordinance. She said she did not attend every meeting, but had no idea that a variance would be requested this soon after putting the digital billboards ordinance into place. Council member Delgado indicated that her problem is not with the act of putting this billboard up, but of having gone through the process and then going back to variances.

Council President Bradley asked that his comments from the Agenda Review, which addressed Council member Delgado's comments, also be included in the minutes. He said that he attended three meetings and that there were no other signs or sites for which a variance would be needed. He said his understanding was that Brown Bottling Company was in the process and that it would be [allowed] a digital billboard on its property. Agenda Review minutes for March 19, 2012, state: "Council President Bradley stated that there was a meeting about signs at which Keri [Galey] of Brown Media Group discussed Brown Media Group's wishes to put a digital board on the corner of its property; he said [those at the meeting] knew about a sign Lamar had up the street, and



decided that if the Lamar sign didn't change, Brown Media Group's plans could work. He said nobody had any idea that the pre-existing condition [the Sonic sign] was there. Council President Bradley said that the group trying to work out digital billboards didn't have a 100 percent [understanding], but that it was an honest mistake and that the City planners and Ms. Brantley were not responsible."

Following discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 4 - Bradley, Carroll, Ware and Naylor

Nays: 1 - Delgado

VI.-4 2012-0625 Approve or Deny the petition filed and represented by Keri Galey on behalf of Brown Media Group, owners, to allow a Use Permit Upon Review for a "Billboard-Digital New" in a B-5 (Regional Business) District, for certain property located at 6817 U. S. Highway 49 (Parcel 53-1064-37, PPIN 27588, Ward 1); Hattiesburg Planning Commission recommended to DENY on March 7, 2012.

Attachments: Brown Bottling mins
item b

A MOTION was made by Vice President Ware and seconded by Council Member Carroll to Approve the petition filed and represented by Keri Galey on behalf of Brown Media Group, owners, to allow a Use Permit Upon Review for a "Billboard-Digital New" in a B-5 (Regional Business) District, for certain property located at 6817 U. S. Highway 49 (Parcel 53-1064-37, PPIN 27588, Ward 1); Hattiesburg Planning Commission recommended to DENY on March 7, 2012.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 4 - Bradley, Carroll, Ware and Naylor

Nays: 1 - Delgado

VI.-5 2012-0606 Adopt the March 20, 2012 Amendments to the Budget for the City of Hattiesburg for the fiscal year ending September 30, 2012; establish a new fund to record TIF debt service; establish a new fund to record revenue bond proceeds; and adopt resolution authorizing publication of amendments for funds in excess of 10% of the original appropriation fund balance.

Attachments: March 2012 Budget Amendments

A MOTION was made by Council Member Carroll and seconded by Vice President Ware to Adopt the March 20, 2012 Amendments to the Budget for the City of Hattiesburg for the fiscal year ending September 30, 2012; establish a new fund to record TIF debt service; establish a new fund to record revenue bond proceeds; and adopt resolution authorizing publication of amendments for funds in excess of 10% of the original appropriation fund balance.

- VI-1 2013-0112** Extend the State of Emergency for an additional thirty (30) days to allow for the ongoing cleanup resulting from the tornado on February 10, 2013.

A MOTION was made by Council Vice President Ware and seconded by Council Member Carroll to Extend the State of Emergency for an additional thirty (30) days to allow for the ongoing cleanup resulting from the tornado on February 10, 2013.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 4 - Bradley, Delgado, Carroll and Ware

Nays: 0

Absent: 1 - Naylor

- VI-2 2013-0122** Acknowledge receipt of sealed proposals submitted for issuance of a general obligation note(s) for the purpose of providing funds to pay for establishing sanitary, storm, drainage or sewerage systems, and repairing, improving and extending the same, and accept the proposal of _____ as the lowest and best proposal submitted, which meets the requirements set forth in the Notice of Note Sale.

Attachments: sealed proposals, 3-5-13 general obligation notes

A MOTION was made by Council Member Delgado and seconded by Council Vice President Ware to Acknowledge receipt of sealed proposals submitted for issuance of a general obligation note(s) for the purpose of providing funds to pay for establishing sanitary, storm, drainage or sewerage systems, and repairing, improving and extending the same, and accept the proposal of Trustmark Bank as the lowest and best proposal submitted, which meets the requirements set forth in the Notice of Note Sale.

City Clerk Eddie Myers opened and read aloud proposals from Trustmark Bank, which offered a rate of 1.38 percent; Bancorp South, with a rate of 1.49 percent; and Hancock Bank, with a rate of 1.39 percent. Mr. Myers conferred with Chief Financial Officer Connie Everett before recommending acceptance of the proposal from Trustmark Bank.

Following discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - Bradley, Delgado, Carroll and Ware

Nays: 0

Absent: 1 - Naylor

- VI-3 2013-0120** TAKE FROM THE TABLE TO APPROVE or DENY Planning Commission's recommendation for the petition filed by Leonard Busby to allow a Use Permit Upon Review for digital billboard, a Variance from the front yard setback and a Variance of the distance requirements from other billboards for certain property located at 6284 Hwy 98 (PPIN's 021146 and 021147, Parcel #'s 052-09-016.00 and 052Q-10-035.00, Ward 3); Hattiesburg Planning Commission recommended to APPROVE on December 13, 2012.

Attachments: Caption Packet, Mins. Public Notice and Appeal letter.pdf



A MOTION was made by Council Member Carroll and seconded by Council Vice President Ware to TAKE FROM THE TABLE TO APPROVE Planning Commission's recommendation for the petition filed by Leonard Busby to allow a Use Permit Upon Review for digital billboard, a Variance from the front yard setback and a Variance of the distance requirements from other billboards for certain property located at 6284 Hwy 98 (PPIN's 021146 and 021147, Parcel #'s 052-09-016.00 and 052Q-10-035.00, Ward 3); Hattiesburg Planning Commission recommended to APPROVE on December 13, 2012.

Council member Carroll stated that the Council heard a [great deal] of testimony and information [at the March 4, 2013, appeal public hearing] on the variance of the hardship for the easement on Highway 98. He said that the Council has known for years that the 98 corridor has [posed] a hardship for all landowners, and gave as an example a variance that was granted more than eight years ago to Wesley Hospital for its sign; he said the sign is on an easement line and still about 100 feet from the highway because of the [size] of the MDOT easement. As for the second variance, Council member Carroll said there is not a sign there right now but the Planning Commission did approve that variance; he stated that he could not find where the Planning Commission received any incorrect or misleading information. Council member Carroll made a Motion to deny the Lamar Signs' appeal and approve the Planning Commission's recommendation.

Council member Delgado said her comments concern not only this situation but situations with [the City's] billboards and signs moving forward. She said when [the City] entered into conversations with the sign businesses some time ago, her understanding is that it did so to make the process better so that businesses that wanted to install signs would have a smoother road to tread. She said [the City] knew about the problems existing along Highway 98 before entering into discussions and that something could have been built into this process that would have eliminated [the need for this public hearing]. She said she would vote for Council member Carroll's motion because the business needs to be able to put up its sign, but that the City has failed both businesses and needs to fix the process once and for all.

Council President Bradley said that he was involved [in the digital billboard issue] three or more years ago and knows both sides very well. He said [the City] tried, and worked very hard [on the digital billboard issue]; he said there are some things that need to be corrected and that there was no way to see or know [about them in advance]; he said the situation has evolved and that this is a very extreme circumstance. Council President Bradley said it is very simple to him. He said the Thames group has worked diligently for a while to put a digital sign in the City of Hattiesburg and has tried a couple locations and [encountered] obstacles. He said the group has been very patient and that the process has worked and was working. He said he believes Mr. Hanbury's [analogy] of Hollywood Squares appears to be [correct]. Council President Bradley said he agrees with everything [Council member Carroll] said and will vote for [the motion] too.

Council member Ware stated that he did not see where the Planning Commission erred. He said [the Council's] job is to look at [the Planning Commission's] decision and that he did not feel that [the Commissioners] made any errors in their decision.

Following discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - Bradley, Delgado, Carroll and Ware

Nays: 0

Absent: 1 - Naylor

- VI.-4 2013-16 Adopt Resolution determining the necessity for amending the Tax Increment Financing Plan, City of Hattiesburg, Mississippi (Whispering Pines Retirement Community Project) 2012; Providing that a public hearing be conducted in connection with the proposed amendment to the Tax Increment Financing Plan, City of Hattiesburg, Mississippi (Whispering Pines Retirement Community Project) 2012; providing for publication of notice of said public hearing; and for related purposes.

Attachments: Resl.TIF Notice

A MOTION was made by Council Vice President Ware and seconded by Council Member Carroll to Adopt Resolution determining the necessity for amending the Tax Increment Financing Plan, City of Hattiesburg, Mississippi (Whispering Pines Retirement Community Project) 2012; Providing that a public hearing be conducted in connection with the proposed amendment to the Tax Increment Financing Plan, City of Hattiesburg, Mississippi (Whispering Pines Retirement Community Project) 2012; providing for publication of notice of said public hearing; and for related purposes.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - Bradley, Delgado, Carroll and Ware

Nays: 0

Absent: 1 - Naylor

- VI.-5 2013-0101 Adopt Resolution approving the form of and authorizing the execution of a Development Agreement between the City of Hattiesburg, Mississippi ("The City") and Whispering Pines Retirement Community, LLC, (The Developer") relating to the Whispering Pines Retirement Community Project; and for related purposes.

Attachments: Resol.Devel Agree

A MOTION was made by Council Member Carroll and seconded by Council Vice President Ware to Adopt Resolution approving the form of and authorizing the execution of a Development Agreement between the City of Hattiesburg, Mississippi ("The City") and Whispering Pines Retirement Community, LLC, (The Developer") relating to the Whispering Pines Retirement Community Project; and for related purposes.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - Bradley, Delgado, Carroll and Ware

Nays: 0

Absent: 1 - Naylor

- VI.-6 2013-0117 Adopt the March 5, 2013 Amendments to the Budget for the City of Hattiesburg for the fiscal year ending September 30, 2013 and adopt resolution authorizing publication of amendments for funds in excess of 10% of the original appropriation fund balance.

Attachments: March 5, 2013 Budget Amendments



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-70

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Unadvertised bid purchase docket 9-29-16 - 11-14-16

Title: Acknowledge receipt of the unadvertised bid purchase docket for the period of September 29, 2016 through November 14, 2016, as provided for in Section 37-1-13(b) of the Mississippi Code 1972.

Type: Action Item

Drafter: Janet Beech

In Control: City Council

Reference:

Attachments: UAB MEMO, UAB DOCKET

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File



Mayor

Johnny L. DuPree, Ph.D.

Council - Ward 1

Kim Bradley

Council - Ward 2

Deborah Denard Delgado

Council - Ward 3

Carter Carroll

Council - Ward 4

Mary Dryden

Council - Ward 5

Henry Naylor

MEMORANDUM

TO: Mayor and Council

FROM: Janet Beech, Purchasing Manager

DATE: November 22, 2016

SUBJECT: Unadvertised Bid Docket Acknowledgement

Attached is the unadvertised bid docket for September 29, 2016 through November 14, 2016. A minimum of two (2) bids have been obtained for each purchase as required by Section 31-7-13 (B) of the Mississippi Code.

This UAB docket is submitted for your review, approval, and acknowledgement on the minutes of the City of Hattiesburg Council Meeting Agenda.

If there are any questions regarding this UAB docket, please feel free to contact me.

Janet Beech, CMPA
Purchasing Manager
601-545-4510

SEPTEMBER 29, 2016 - NOVEMBER 14, 2016

SUCCESSFUL BID/ OTHER BID	BID RECEIVED	BID AWARDED	BID AMOUNT	PURCHASE ORDER	ITEM DESCRIPTION
AMERICAN AIR SPECIALISTS INC HUB REFRIGERATION & FIXTURE CO	9/28/2016	9/29/2016	9,938.00	164740	SEWER REPAIR/FIRE STATION 3 PART OF THE ACA
	9/28/2016	9/29/2016	14,995.00		
UNITED FENCE COMPANY JEFCOAT FENCE OF HATTIESBURG	10/12/2016	10/17/2016	27,186.00	165085	TATUM REC OFFICE-FENCE
	10/13/2016	10/17/2016	31,025.00		
A & R FARM AND GARDEN AGRI-AFC LLC B W I	10/13/2016	10/17/2016	14,134.50	165090	RYE GRASS SEED FOR ALL BALLFIELDS/ENHANCEME
	10/13/2016	10/17/2016	14,795.00		
	10/14/2016	10/17/2016	14,825.00		
METRIX SOLUTIONS LIFE CYCLE SOLUTIONS	10/19/2016	10/20/2016	15,759.81	165241	PORTSERVER AND SOFTWARE
	10/19/2016	10/20/2016	17,908.99		
PLAY IT AGAIN SPORTS J M H GRAPHICS	10/26/2016	10/27/2016	2,382.00	165441	MCNAIR CTR:ADULT SOFTBALL TSHIRTS
	10/25/2016	10/27/2016	2,853.00		
PRIORITY ALERT, LLC GILLILANDS ELECTRONICS SUPPLY CO MCLELLAND TV COMPANY INC	11/9/2016	11/9/2016	17,287.74	165782	TELEPHONE/COMPUTER DROPS FOR TEMP POLICE BU
	10/31/2016	11/9/2016	18,406.00		
	11/4/2016	11/9/2016	24,404.89		

BILL TO: CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-584-4895

CITY OF HATTIESBURG
PURCHASE ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

Page 1
Date 10/17/16

PO No. 165085
Req No. 2468

VENDOR MAILING:
UNITED FENCE COMPANY
255 MCLEOD ST
HATTIESBURG MS 39401-3816

JONES, ANN
VENDOR # 00013161

SHIP TO :
CITY OF HATTIESBURG
TATUM PARK
101 PARKWAY BLVD
HATTIESBURG MS 39401

PROCESSING CODE:

PROJECT LINE: TATUM REC OFFICE-FENCE

SEND METHOD 1 (601)5820404

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
002300.6999	VENDOR SHALL Provide material, labor, and equipment to install approx 253' of 72" Ornamental Aluminum Fence (Industrial Grade 1" Picket-Black), 2-5' Walk Gates, 1-22' Cantilever Slide Gate 1-Liftmaster CSL24u Slide Gate Operator with Key Pad 779' of 72"X6ga (9ga Core) Black Vinyl Coated Chain Link Fence (All Commercial Grade Material with all necessary fence accessories such as posts, line posts, caps, top rail, etc for a complete commercial fence installation) 1- Double Swing Gate 16'Wide To be installed at Tatum Recreation Office as per attached Layout-Vendor Shall be responsible for visiting site to Verify all site conditions and quantities. Quantities in this description are approximations only. Vendor must confirm	1.00	EA	27,186.0000	27,186.00



TOTAL CONTRACT AMOUNT NOT TO EXCEED 27,186.00

SUBMIT SEPARATE INVOICES FOR EACH ORDER. PREPAY SHIPPING CHARGES IF ANY AND ADD TO INVOICE.

FOR CORRECTIONS TO VENDOR ADDRESS ABOVE, CONTACT ACCOUNTING (601) 545-4686.

KERMAS EATON
CITY CLERK

LIBRARY

601

Shipping terms are F.O.B. destination, freight prepaid

DATE 10/12/2015

DIRECT LINE: TATUM PDC OFFICE-FBIHQ

NOTES

Request Date 10/10/16

THEY SHALL

VENDOR SHALL provide material, labor and equipment to install approx. 2200' of new ornamental Aluminum fence. Individual slide gate 1'-2 1/8" x 6'-0" tall gates. Operate with two pad locks. Chain link fence 795' of 1/2" Aluminum Grade Material with all necessary hardware such as posts, end posts, caps, top rail fence attachment) & Double Gate for a complete exterior fence installation. Office \$5 per attached site to be installed at main Recreation Office responsible for visiting site to verify all site conditions and quantities. Quantities in this description are approximations only. Vendor must confirm

QTY	UNIT	UNIT PRICE	EXTENDED COST	DELIVERY DATE	EXPIRED DATE
1.00	EA	27.186.00	27.186.00	10/12/16	12/17/16

TOTAL PRICE \$27186.00

91-11-01
10-17-16

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 10/10/16
Order Number 2468 QQJEFCOAT FENCE OF HATTIESB
5328 HWY 42
PO BOX 1167
HATTIESBURG MS 39403-1167Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

PRINTED NAME

Carlos Flores

Phone Number . . 601 5454512

SIGNATURE

*[Signature]*DATE *10-13-16*

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: TATUM REC OFFICE-FENCE

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
VENDOR SHALL	10/10/16	1.00	EA	<u>\$31,025.00</u>	<u>\$31,025.00</u>	<u>11-14-16</u>	<u>12-31-16</u>

Provide material, labor, and equipment to install approx 253' of 72" Ornamental Aluminum Fence (Industrial Grade 1" Picket-Black), 2-5' Walk Gates, 1-22' Cantilever Slide Gate 1-Liftmaster CSL24u Slide Gate Operator with Key Pad 779' of 72" X 6ga (9ga Core) Black Vinyl Coated Chain Link fence (All Commercial Grade Material with all necessary fence accessories such as posts, line posts, caps, top rail, etc for a complete commercial fence installation) 1- Double Swing Gate 16' Wide
To be installed at Tatum Recreation Office as per attached Layout-Vendor Shall be responsible for visiting site to Verify all site conditions and quantities. Quantities in this description are approximations only. Vendor must confirm

TOTAL BID PRICE \$31,025.00

BILL TO: CITY OF HATTIESBURG
 ACCOUNTING DEPT
 PO BOX 1898
 HATTIESBURG, MS 39403-1898
 FAX INVOICE TO: 601-584-4895

THE CITY OF HATTIESBURG
 PURCHASE ORDER
 THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

POINT OF CONTACT:

DANIELS, ROBERT
 MINUTE BOOK # PENDING
 VENDOR # 90062870

VENDOR MAILING:
 AMERICAN AIR SPECIALISTS INC
 199 SULLIVAN-KILRAIN RD
 PO BOX 162
 HATTIESBURG MS 39403-0162

Page Date 09/29/16
 PO No. 164740
 Req No. 2446

SHIP TO :
 CITY OF HATTIESBURG
 NOT APPLICABLE

PROCESSING CODE:
 SEND METHOD 1 (601)5447746

UM	UNIT COST	TOTAL COST
EA	9,938.0000	9,938.00

Account #	Description	QTY	EA	UNIT COST	TOTAL COST
001160.6350	REROUTE ALL SANITARY LINES OUT THE BACK OF THE BUILDING. REUSE ALL REUSABLE FIXTURES. STUB OUT 5 FEET OUT THE BACK OF THE BUILDING THAT CITY CAN TIE IN A NEW 4 INCH LINE	1.00			

PROJECT LINE: SEWER REPAIR/FIRE STATION 3 PART OF THE ACADEMY

TOTAL CONTRACT AMOUNT NOT TO EXCEED

9,938.00

SUBMIT SEPARATE INVOICES FOR
 EACH ORDER. PREPAY SHIPPING
 CHARGES IF ANY AND ADD TO INVOICE.

THIS PO NUMBER MUST APPEAR
 ON ALL PACKAGES & INVOICES.

FOR CORRECTIONS TO VENDOR
 ADDRESS ABOVE CONTACT ACCOUNTING
 (601) 545-4686.

KERMAE EATON
 CITY CLERK

1530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

AMERICAN AIR SPECIALISTS
199 SULLIVAN-KILPATRICK RD
PO BOX 162
HATTIESBURG MS 39403-0162

Mail To

CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Page No. 1
Date 9/12/16
Order Number 2446 QQ

PRINTED NAME: **Howard Tucker Jr.**
Howard Tucker Jr. 09/23/16

Phone Number . . . 601 5454312

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: SEWER REPAIR/FIRE STATION 3 PART OF THE ACADREY

ITEM DESCRIPTION

BRIDGE ALL
SANITARY LINES OUT THE BACK OF THE BUILDING. REUSE ALL
STUD OUT 5 FEET OUT THE BACK OF THE
BROKEN FIXTURES. CAN TIE IN A NEW 4 INCH LINE
BUILDING THAT CITY CAN TIE IN A NEW 4 INCH LINE

Request Date 08/05/16

QTY 1.00

Unit Price \$9,938.00

Extended Cost \$9,938.00

Delivery Date

Expired Date

Paul Tuley

TOTAL BID PRICE \$9,938.00
Plus Tax

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

Page No. 1
Date 9/12/16
Order Number 2446 00

HUB REFRIGERATION & FIXTU
2808 EDWARD ST
PO BOX 17395
HATTIESBURG MS 39404-7395

Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

PRINTED NAME George Curry

Phone Number . . 601 5454512

SIGNATURE George Curry DATE 9/28/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: SEWER REPAIR/FIRE STATION 3 PART OF THE ACADEMY

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Exp Da
REROUTE ALL SANITARY LINES OUT THE BACK OF THE BUILDING, REUSE ALL REUSABLE FIXTURES, STUB OUT 5 FEET OUT THE BACK OF THE BUILDING THAT CITY CAN TIE IN A NEW 4 INCH LINE	08/05/16	1.00	EA	14,995.00	14,995.00		

TOTAL BID PRICE \$14,995.00

BILL TO: CITY OF HATTIESBURG
 CITY OF HATTIESBURG
 ACCOUNTING DEPT
 PO BOX 1898
 HATTIESBURG, MS 39403-1898
 FAX INVOICE TO: 601-584-4895

CITY OF HATTIESBURG
 PURCHASE ORDER
 THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

POINT OF CONTACT:

JONES, ANN
 VENDOR # 00001008
 (601) 5454661

VENDOR MAILING:
 A & R FARM AND GARDEN
 5367 HIGHWAY 42
 HATTIESBURG MS 39401-1366

PO No. 165090
 Req No. 2465

Page Date 10/17/16

PROJECT LINE: RYE GRASS SEED FOR ALL BALLFIELDS/ENHANCEMENT AREAS

PROCESSING CODE:

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
002300.5440	ANNUAL TURF TYPE Rye Grass Seed-Nusprint or TXR or approved equal-Vendor Shall provide seed documentation with bid	270.00	BC	35.3500	9,544.50
002300.5440	GULF ANNUAL RYE Grass Seed	200.00	BC	22.9500	4,590.00



TOTAL CONTRACT AMOUNT NOT TO EXCEED 14,134.50

SUBMIT SEPARATE INVOICES FOR EACH ORDER. PREPAY SHIPPING CHARGES IF ANY AND ADD TO INVOICE.

FOR CORRECTIONS TO VENDOR ADDRESS ABOVE CONTACT ACCOUNTING (601) 545-4686.

KERMAS EATON
 CITY CLERK

A & R FARM AND GARDEN
5367 HIGHWAY 42
HATTIESBURG MS 39401-1366

Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1838
HATTIESBURG MS 39401

Phone Number . . 601 5454512

PRINTED NAME A & R Farm & Garden

SIGNATURE [Signature] DATE 10/13/16

PROJECT LINE: RYE GRASS SEED FOR ALL BALLFIELDS/ENHANCEMENT AREAS

Shipping terms are F.O.B. destination, freight prepaid

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
ANNUAL TURF TYPE Rye Grass Seed-Musprint or 3 or approved equal-Vendor Shall provide seed documentation with bid	10/10/16	270.00	BC	35.35	9,544.50	10/28/16	12/31/16
GULF ANNUAL RYE Grass Seed	10/10/16	200.00	BC	22.95	4,590.00	10/28/16	12/31/16

TOTAL BID PRICE 14134.50

* All items approved equal
particular
10-17-16

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

Page No. 1
Date 10/10/16
Order Number 2465 00

AGRI-AFC LLC
203 WISTERIA DR
HATTIESBURG MS 39401-7839

Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . . 601 5454512

PRINTED NAME Agri-AFC, LLC
SIGNATURE [Signature] DATE 10/13/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: RYE GRASS SEED FOR ALL BALLFIELDS/ENHANCEMENT AREAS

ITEM DESCRIPTION		Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expire Date
ANNUAL TURF TYPE		10/10/16	270.00	BC	\$38.50	\$10,395.00	10/10/16	
Rye Grass Seed - Musprunt or TXR or approved equal - Vendor								
Shall provide seed documentation with bid								
GULF ANNUAL RYE		10/10/16	200.00	BC	\$22.00	\$4,400.00	After Aug 10/25	
Grass Seed								

TOTAL BID PRICE 14,795.00

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

B W I - JACKSON
PO BOX 1175
CLINTON MS 39060-1175

Page No. 1
Date - 10/10/16
Order Number 2465 QQ

Mail To. . . . CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1888
HATTIESBURG MS 39401

PRINTED NAME Cody L. Jackson

Phone Number . . 601 5464512

SIGNATURE Cody L. Jackson DATE 10/14/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: RYE GRASS SEED FOR ALL BALLFIELDS/ENHANCEMENT AREAS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
ANNUAL TURF TYPE Rye Grass Seed-Musprint or TXR or approved equal-Vendor Shall provide seed documentation with bid	10/10/16	270.00	BC	57.50	10,125.00	10/21	11/4
GULF ANNUAL RYE Grass Seed	10/10/16	200.00	BC	23.50	4,700.00	10/21	11/4

TOTAL BID PRICE 14,825.00

BILL TO:
CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-584-4895

VENDOR MAILING:
METRIX SOLUTIONS
1888 MAIN STREET,
MADISON MS 39110

STE C #117

POPE, MICHAEL
MINUTE BOOK # PENDING
VENDOR # 00100168

(601) 5454511

SHIP TO
CITY OF HATTIESBURG
INFORMATION TECHNOLOGY DIVISION
200 FORREST STREET - 1ST FLOOR
HATTIESBURG MS 39401

CITY OF HATTIESBURG
PURCHASE ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

POINT OF CONTACT:

Page
Date
PO No.
Req No.

10/20/16
-
165241
2470

PROJECT LINE: PORTSERVER AND SOFTWARE

PROCESSING CODE:

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
-----------	-------------	-----	----	-----------	------------

SEND METHOD 1 (865)3810564

001091.7327

DIGI PORTSERVER
TS 4 TERMINAL SERVER 4 X RJ-45

1.00 EA 455.5300 455.53

001091.7327

MICROSOFT SQL
SERVER 2016 STANDARD CORE - LICENSE-2 CORE-VOLUME, GOVERNMENT
, MICROSOFT QUALIFIED - PC - ALL LANGUAGES

2.00 EA 2,816.3800 5,632.76

001091.7327

OLP GOVT WIN SVR DC
CORE 2016 2LIC NL CORE LIC QLF

16.00 EA 604.4700 9,671.52



TOTAL CONTRACT AMOUNT NOT TO EXCEED

15,759.81

SUBMIT SEPARATE INVOICES FOR
EACH ORDER. PREPAY SHIPPING
CHARGES IF ANY AND ADD TO INVOICE.

FOR CORRECTIONS TO VENDOR
ADDRESS ABOVE, CONTACT ACCOUNTING
(601) 545-4686.

KERMAN EATON
CITY CLERK

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 10/18/16
Order Number 2470 OQMETRIX SOLUTIONS
1888 MAIN STREET, STE C #
MADISON MS 39110Mail To. . . . CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . 601 5454512

PRINTED NAME Patricia J. GrimSIGNATURE Patricia J. Grim DATE 10/18/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: PORTSERVER AND SOFTWARE

ITEM DESCRIPTION

Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
10/18/16	1.00	EA	455.53	455.53	11/18/16	11/18/16
					from order date	
	2.00	EA	2816.38	5632.76		11/18/16
10/18/16	16.00	EA	604.47	9671.52		11/18/16

DIGI PORTSERVER
TS 4 TERMINAL SERVER 4 X RJ-45
1 X RJ-45MICROSOFT SQL
SERVER 2016 STANDARD CORE - LICENSE-2 CORE-VOLUME, GOVERNMENT
MICROSOFT QUALIFIED - PC - ALL LANGUAGESOLP GOVT WIN SVR DC
CORE 2016 2LICS NL CORE LICS QLFDTOTAL BID PRICE 15759.81

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 10/18/16
Order Number 2470 00LIFE CYCLE SOLUTIONS
1817 CRANE RIDGE DR
SUITE 200
JACKSON MS 39216Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401PRINTED NAME: BRIAN PARKS

Phone Number . . 601 5454512

SIGNATURE Brian Parks DATE 10/19/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: PORTSERVER AND SOFTWARE

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
DIGI PORTSERVER TS 4 TERMINAL SERVER 4 X RJ-45 1 X RJ-45	10/18/16	1.00	EA	\$540.91	\$540.91	11/15/16	11/19/16
MICROSOFT SQL SERVER 2016 STANDARD CORE - LICENSE-2 CORE-VOLUME, GOVERNMENT , MICROSOFT QUALIFIED - PC - ALL LANGUAGES	10/18/16	2.00	EA	\$3,100.00	\$6,200.00	11/15/16	11/19/16
OLP GOVT WIN SVR DC CORE 2016 2LICS NL CORE LICs QLED	10/18/16	16.00	EA	\$698.00	\$11,168.00	11/15/16	11/19/16

TOTAL BID PRICE \$17,908.91

BILL TO: CITY OF HATTIESBURG
 ACCOUNTING DEPT
 PO BOX 1898
 HATTIESBURG, MS 39403-1898
 FAX INVOICE TO: 601-584-4895

CITY OF HATTIESBURG
 PURCHASE ORDER
 THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432
 POINT OF CONTACT:

STALLINGS, EDITH
 VENDOR # 00081970
 (601) 5454624

VENDOR MAILING:
 PLAY IT AGAIN SPORTS
 4400 HARDY STREET
 HATTIESBURG MS 39402
 SUITE A-12

Page Date 10/27/16
 PO No. 165441
 Req No. 2471

SHIP TO : HATTIESBURG
 CITY OF HATTIESBURG
 MERCHANDISE ORDERED WILL BE PICKED UP

PROJECT LINE: MCNAIR CTR:ADULT SOFTBALL TSHIRTS
 Account #

PROCESSING CODE:
 SEND METHOD 1 (601)2688917
 UM UNIT COST TOTAL COST

002315.5510
 Description QTY

STYLE 1798 DIGI 138.00
 CAMO WICKING T-SHIRT 100% POLYESTER WICKING PRINTED KNIT
 SELF-FABRIC COLLOR, SET-IN SLEEVES, DOUBLE-NEEDLE HEMMED
 SLEEVES AND BOTTOM, REGULAR SIZES, 2 COLOR LOGO FRONT AND 1
 COLOR LOGO SLEEVE, PURPLE/WHITE

002315.5510
 SAME AS ITEM 1
 SIZES 2X-3X PURPLE/WHITE

EA 13.0000 1,794.00
 EA 42.00 588.00



TOTAL CONTRACT AMOUNT NOT TO EXCEED 2,382.00

SUBMIT SEPARATE INVOICES FOR EACH ORDER. PREPAY SHIPPING CHARGES IF ANY AND ADD TO INVOICE.

FOR CORRECTIONS TO VENDOR ADDRESS ABOVE CONTACT ACCOUNTING (601) 545-4686.

KERMAS EATON
 CITY CLERK

PLAY IT AGAIN SPORTS
4400 HARDY STREET SUITE
HATTIESBURG MS 39402

Order Number : 2471 00

Mail To : CITY OF HATTIESBURG
PURCHASING DIVISION
220 E FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number : 601 5454512

PRINTED NAME Jason Tansend

SIGNATURE [Signature] DATE 11/15

PROJECT LINE: MCMAIR CTR: ADULT SOFTBALL TSHIRTS

Shipping terms are F.O.B. destination, freight prepaid

ITEM DESCRIPTION	Request Date	QTY	Unit	Unit Price	Extended Cost	Delivery Date	Expiration Date
STYLE 1738 DIGI CAMO WICKING T-SHIRT 100% POLYESTER WICKING PRINTED KNIT SELF-FABRIC COLLAR, SET-IN SLEEVES DOUBLE-NEEDLE HEHEMED SLEEVES AND BOTTOM, REGULAR SIZES, 2 COLOR LOGO FRONT AND I COLOR LOGO SLEEVE, PURPLE/WHITE	10/24/16	138.00	EA	13.00	1794.00	11/3	11/29

SAME AS ITEM 1
SIZES 2X-3X PURPLE/WHITE

10/24/16 42.00 EA 588.00 11/3 11/29

6012688917

TOTAL BID PRICE 2382

Oliver D. Jewell

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 10/24/16
Order Number 2471 00JASON SPIERS
J M H GRAPHICS
223 S 40TH AVE
HATTIESBURG MS 39402-1604Mail To: CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401PRINTED NAME Melissa Spiers

Phone Number 601 5454512

SIGNATURE Melissa Spiers DATE 10/25/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: MCNAIR CTR: ADULT SOFTBALL TSHIRTS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
------------------	--------------	-----	----	------------	---------------	---------------	--------------

STYLE 1798 DIGI
CAMO WICKING T-SHIRT 100% POLYESTER WICKING PRINTED KNIT
SELF-FABRIC COLLOR, SET-IN SLEEVES DOUBLE-NEEDLE HEMMED
SLEEVES AND BOTTOM, REGULAR SIZES, 2 COLOR LOGO FRONT AND 1
COLOR LOGO SLEEVE, PURPLE/WHITE

10/24/16

138.00

EA

15.50

SAME AS ITEM 1
SIZES 2X-3X PURPLE/WHITE

10/24/16

42.00

EA

1700

TOTAL BID PRICE

\$2,853

BILL TO: CITY OF HATTIESBURG
 ACCOUNTING DEPT
 PO BOX 1898
 HATTIESBURG, MS 39403-1898
 FAX INVOICE TO: 601-584-4895

THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432
 POINT OF CONTACT:

POPE MICHAEL
 MINUTE BOOK # PENDING
 VENDOR # 00001489

VENDOR MAILING:
 GULF LANDS ELECTRONICS SUPPLY CO
 PO BOX 2052
 HATTIESBURG MS 39403-2052

CITY OF HATTIESBURG
 PURCHASE ORDER
 SHIP TO: CITY OF HATTIESBURG
 INFORMATION TECHNOLOGY DIVISION
 200 FORREST STREET - 1ST FLOOR
 HATTIESBURG MS 39401

Page Date - 11/09/16
 PO No. - 165782
 Req No. - 2473

PROJECT LINE: TELEPHONE/COMPUTER DROPS FOR TEMP POLICE BUILDING		PROCESSING CODE:		SEND METHOD 1 (601)5847700	
Account #	Description	QTY	UM	UNIT COST	TOTAL COST
001092.6350	DUAL CAT 5E TELEPHONE/COMPUTER DROPS	113.00	EA	145.0000	16,385.00
001092.6350	7'-4 POST DISTRIBUTION RACK	1.00	EA	575.0000	575.00
001092.6350	96 PORT PATCH PANELS	2.00	EA	95.0000	190.00
001092.6350	48 PORT PATCH PANEL	1.00	EA	52.0000	52.00
001092.6350	19" SHELF	1.00	EA	100.0000	100.00
001092.6350	19" POWER STRIP	1.00	EA	200.0000	200.00
001092.6350	7 FT PATCH CABLES	113.00	EA	4.0000	452.00
001092.6350	3 FT PATCH CABLES COMPLETELY INSTALLED, ONE YEAR WARRANTY, ALL PARTS AND LABOR	113.00	EA	4.0000	452.00

TOTAL CONTRACT AMOUNT NOT TO EXCEED 18,406.00

SUBMIT SEPARATE INVOICES FOR EACH ORDER. PREPAY SHIPPING CHARGES IF ANY AND ADD TO INVOICE.

FOR CORRECTIONS TO VENDOR ADDRESS ABOVE CONTACT ACCOUNTING (601) 545-4686.

KERMAS EATON
 CITY CLERK

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 10/31/16
Order Number 2473 OQGILLILANDS ELECTRONICS SU
PO BOX 2052
HATTIESBURG MS 39403-2052Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401PRINTED NAME: Beth G. Broome

Phone Number . . . 601 5454512

SIGNATURE Beth G. Broome DATE 10/31/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: TELEPHONE/COMPUTER DROPS FOR TEMP POLICE BUILDING

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
DUAL CAT 5E TELEPHONE/COMPUTER DROPS	10/31/16	113.00	EA	145.00	16385.00		
7'-4 POST DISTRIBUTION RACK	10/31/16	1.00	EA	575.00	575.00		
96 PORT PATCH PANELS	10/31/16	2.00	EA	95.00	190.00		
48 PORT PATCH PANEL	10/31/16	1.00	EA	520.00	520.00		
19" SHELF	10/31/16	1.00	EA	100.00	100.00		
19" POWER STRIP	10/31/16	1.00	EA	200.00	200.00		
7 FT PATCH CABLES	10/31/16	113.00	EA	4.00	452.00		
3 FT PATCH CABLES COMPLETELY INSTALLED, ONE YEAR WARRANTY, ALL PARTS AND LABOR	10/31/16	113.00	EA	4.00	452.00		

TOTAL BID PRICE 18,406.00

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 11/04/16
Order Number 2473 00MCLELLAND TV COMPANY INC
302 BROADWAY DR
HATTIESBURG MS 39401-5066Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . 601 5454512

PRINTED NAME McE L L A N D T V C O M P A N Y I N CSIGNATURE [Signature] DATE 11/17/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: TELEPHONE/COMPUTER DROPS FOR TEMP POLICE BUILDING

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
DUAL CAT 5E TELEPHONE/COMPUTER DROPS	10/31/16	113.00	EA	16,500	16,500.00	11/24/16	12/4/16
7'-4 POST DISTRIBUTION RACK	10/31/16	1.00	EA	750.00	750.00	"	"
96 PORT PATCH PANELS	10/31/16	2.00	EA	1098.60	1098.00	"	"
48 PORT PATCH PANEL	10/31/16	1.00	EA	345.00	345.00	"	"
19" SHELF	10/31/16	1.00	EA	75.00	75.00	"	"
19" POWER STRIP	10/31/16	1.00	EA	99.99	99.99	"	"
7 FT PATCH CABLES	10/31/16	113.00	EA	14.30	1615.90	"	"
3 FT PATCH CABLES COMPLETELY INSTALLED, ONE YEAR WARRANTY, ALL PARTS AND LABOR	10/31/16	113.00	EA	6.00	678.00	"	"

TOTAL BID PRICE 21,161.89

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 11/04/16
Order Number 2473 00MCLELLAND TV COMPANY INC
302 BROADWAY DR
HATTIESBURG MS 39401-5066Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . 601 5454512

PRINTED NAME CRIS LLCSIGNATURE [Signature] DATE 11/17/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: TELEPHONE/COMPUTER DROPS FOR TEMP POLICE BUILDING

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
DUAL CAT 5E TELEPHONE/COMPUTER DROPS	10/31/16	113.00	EA	163.500 146.02	16,500.00 16,500.00	11/24/16	12/4/16
7'-4 POST DISTRIBUTION RACK	10/31/16	1.00	EA	750.00 750.00	750.00	"	"
96 PORT PATCH PANELS	10/31/16	2.00	EA	1098.00 549.00	1098.00	"	"
48 PORT PATCH PANEL	10/31/16	1.00	EA	345.00 345.00	345.00	"	"
19" SHELF	10/31/16	1.00	EA	75.00 75.00	75.00	"	"
19" POWER STRIP	10/31/16	1.00	EA	99.99 99.99	99.99	"	"
7 FT PATCH CABLES	10/31/16	113.00	EA	14.30 14.30	1615.90	"	"
3 FT PATCH CABLES COMPLETELY INSTALLED, ONE YEAR WARRANTY, ALL PARTS AND LABOR	10/31/16	113.00	EA	6.00 6.00	678.00	"	"

TOTAL BID PRICE 21,166.89

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date - 11/04/16
Order Number : : 2473 00PRIORITY ALERT, LLC
140 MAYFAIR ROAD
SUITE 1900
HATTIESBURG MS 39402MS. LIC: 15006401
/0057171Mail To. . . . CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401PRINTED NAME STEPHEN GEORGE

Phone Number . . 601 5454512

SIGNATURE Stephen George DATE 11/9/16

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: TELEPHONE/COMPUTER DROPS FOR TEMP POLICE BUILDING

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
DUAL CAT 5E TELEPHONE/COMPUTER DROPS	10/31/16	113.00	EA	\$ 129.00	\$ 14,577.00	11/21/16 OR SOONER	12/9/16
7'-4 POST DISTRIBUTION RACK	10/31/16	1.00	EA	\$ 399.00	\$ 399.00		
96 PORT PATCH PANELS	10/31/16	2.00	EA	\$ 449.00	\$ 898.00		
48 PORT PATCH PANEL	10/31/16	1.00	EA	\$ 299.00	\$ 299.00		
19" SHELF	10/31/16	1.00	EA	\$ 45.00	\$ 45.00		
19" POWER STRIP	10/31/16	1.00	EA	\$ 55.00	\$ 55.00		
7 FT PATCH CABLES	10/31/16	113.00	EA	\$ 4.99	\$ 563.87		
3 FT PATCH CABLES COMPLETELY INSTALLED, ONE YEAR WARRANTY, ALL PARTS AND LABOR	10/31/16	113.00	EA	\$ 3.99	\$ 450.87		

DUE UPON COMPLETIONTOTAL BID PRICE \$ 17,287.74



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-55

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Approve the City's purchase of one (1) grave space

Title: Approve the City's purchase of one (1) grave space, located in South Half (S1/2) of the Northwest Quarter (NW 1/4), Section 32, Lot 33, at Highland Cemetery (Minute Book# 2014-54) in the amount of \$ 175.00 to Opal Mitchell; authorize manual check for the same.

Type: Action Item

Drafter: Deborah Bourne

In Control: City Council

Reference:

Attachments: Buy Back (Opal Mitchell), Receipt (Opal Mitchell), Deed (Opal Mitchell)

File Created: 11/14/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

Date: November 08, 2016

To whom it may concern:

I, Opal Mitchell am requesting to sell back (1) grave space

(s) located at Highland Cemetery, in Section 32, Lot 33, S 1/2 of the NW 1/4, to the

City of Hattiesburg, which was purchased on February 04, 2014 at the price of

\$ 175.00 per grave space.

MB#2014-54

Opal Mitchell

Sincerely,

Mail to:

483 Monroe Road
Hattiesburg, MS. 39401

OK
DB
11/8/16

MB 2014-54

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

SOLD TO:

Mr. Mrs. Miss

Paul Mitchell

ADDRESS

3304 N. George Ave. Hattiesburg, MS 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

5 $\frac{1}{2}$ 1/4 Lot No. 33

Section No. 33

in

Highland Cemetery

Number of grave spaces 1

Price per grave space \$ 175.00

Price Received \$ 175.00

CITY OF HATTIESBURG, MISSISSIPPI

By

10/24/14

Supt. of City Cemeteries

Hattiesburg, Miss., 2-4-

20 14

STATE OF MISSISSIPPI
 COUNTY OF FORREST/LAMAR
 CITY OF HATTIESBURG
 HATTIESBURG, MS

DEED TO CEMETERY LOT HIGHLAND CEMETERY

For and in consideration of the sum of ONE HUNDRED SEVENTY FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Opal Mitchell, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

South Half(S1/2) of the Northwest Quarter(Nw1/4)

Lot Number 33

Section Number: 32

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of February, 2014.

ATTEST:

Connie Everett
 DEPUTY CITY CLERK

CITY OF HATTIESBURG, MISSISSIPPI
Johnny L. DuPree
 MAYOR

(SEAL)

STATE OF MISSISSIPPI
 COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Johnny L. DuPree and Connie Everett, Mayor and Deputy City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-56

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Approve the sale of grave spaces.

Title: Approve the sale of grave spaces per attached memo.

Type: Action Item

Drafter: Deborah Bourne

In Control: City Council

Reference:

Attachments: Deeds, Receipts

File Created: 11/14/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Leo Washington, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

South Half (S ½) of the Southeast Quarter (SE ¼)

Lot 40

Section 37

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 22nd day of November, 2016.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Johnny L. DuPree and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Berlean Jacqueline Smith, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

North Half (N ½) of the Northeast Quarter (NE ¼)

Lot 90

Section 23

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 22nd day of November, 2016.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Johnny L. DuPree and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Charles E. Calloway, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

South Half (S ½) of the Southwest Quarter (SW ¼)

Lot 27

Section 33

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 22nd day of November, 2016.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Johnny L. DuPree and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of THREE HUNDRED FIFTY AND NO/100 Dollars (\$350.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto, Evia Evans, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

Southwest Quarter (SW 1/4)

Lot Number 15

Section Number 35

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

Two Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 22nd day of November, 2016.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Johnny L. DuPree and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 22nd day of November, 2016

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Shirley Brevard, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

North Half (N ½) of the Southwest Quarter (SW ¼)

Lot 38

Section 31

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 22nd day of November, 2016.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Johnny L. DuPree and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Johnny Clyde Allen, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

East Half (E ½) of the Northeast Quarter (NE ¼)

Lot 93

Section 29

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 22nd day of November, 2016.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Johnny L. DuPree and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., Oct 23 20 16

SOLD TO:

Mr.. Mrs. Miss Leo Washington

ADDRESS 28 Brantley Drive, Hattiesburg, MS 39402

desires to purchase the grave space described below, subject to Cemetery regulations.

S SE $\frac{1}{2}$ Lot No. 40 Section No. 37 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CK # 7457

CITY OF HATTIESBURG, MISSISSIPPI

By LaDonna L. Jeff
Supt. of City Cemeteries

ma. 1 to 5
1429 Whitewood
Drive
Gautier, MS 39553

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 10-26 20 16

SOLD TO:

Mr.. Mrs. Miss Berlean Jacqueline Smith

ADDRESS 117 Crescent Drive Hattiesburg, MS 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

N $\frac{1}{2}$ NE $\frac{1}{4}$ Lot No. 90 Section No. 23 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CK # 12014

CITY OF HATTIESBURG, MISSISSIPPI

By LaDonna L. Jeff
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 10-21- 20 16

SOLD TO:

Mr.. Mrs. Miss Charles F. Calloway

ADDRESS 622 New Orleans St Hattiesburg, MS 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

S $\frac{1}{2}$ SW $\frac{1}{4}$ Lot No. 27 Section No. 33 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CITY OF HATTIESBURG, MISSISSIPPI

mail to
262 S. Mill Creek Rd
Apt - A
Purvis, MS. 39475

CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES

Hattiesburg, Miss., 10-21- 20 16

SOLD TO:

Mr. Mrs. Miss Eva Evans

ADDRESS 805 Hardy St. Hattiesburg, MS. 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

1/2 SW 1/4 Lot No. 15 Section No. 35 in Highland Cemetery

Number of grave spaces 2 Price per grave space \$ 175.00

Price Received \$ 350.00

Ck # 1008

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Bourne
Supt. of City Cemeteries

CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES

Hattiesburg, Miss., Nov 4 20 16

SOLD TO:

Mr. Mrs. Miss Johnny Clyde Allen

ADDRESS 803 Maxwell Dr. Hattiesburg, MS 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

E 1/2 NE 1/4 Lot No. 93 Section No. 29 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

cash

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Bourne
Supt. of City Cemeteries

CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES

Hattiesburg, Miss., Nov 7 20 16

SOLD TO:

Mr. Mrs. Miss Shirley Brevard

ADDRESS 5752 Hwy 49 S. Hattiesburg, MS 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

IV 1/2 SW 1/4 Lot No. 38 Section No. 31 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

Ck # 81111

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Bourne
Supt. of City Cemeteries



City of Hattiesburg, MS

200 Forrest St.
P.O. Box 1898
Hattiesburg, MS 39401

FILE NUMBER: 2016-73

MEETING DATE: 11/22/2016

MINUTE BOOK NUMBER:

Brief Title: Claims docket for the period ending 11-18-16

<u>Title:</u> Approve claims docket for the period ending November 18, 2016.

Type: Action Item

Drafter: Kermas Eaton

In Control: City Council

Reference:

Attachments: Docket

File Created: 11/15/2016

Budget Information:

Expenditure Type:

Purchasing Item:

Publication Information:

History of Legislative File

00001 ANDERSON RETAIL INC	123411	00165353 16000861 FLOORING TRAFF/CONSTR DEPT	11/18/16	254168	1,443.94-

ANDERSON RETAIL INC					
Sum					1,443.94-
00001 ARNOLD LINE WATER ASSN I 2145 10/20/1 00020172 16000800 SERV 9/20-10/20/16 #8 FIRE STA			11/18/16	254176	32.00-

ARNOLD LINE WATER ASSN I					
Sum					32.00-
00001 AT&T	601M23905500	00020172 16000801 VEHICLE LOC 11/16 POLICE	11/18/16	254177	202.00-

AT&T					
Sum					202.00-
00001 AT&T CAPITAL SERVICES	2998217	00165809 16000990 HPD INTERACT SOFTWARE	11/18/16	254178	12,556.56-

AT&T CAPITAL SERVICES					
Sum					12,556.56-
00001 AUTO ARMATURE SERVICE IN 07438		00165571 16000835 BATTERY U#18557 FIRE DEPT	11/18/16	254181	160.95-
00001 AUTO ARMATURE SERVICE IN 0745L		00165544 16000864 STARTER U#15964 STREET	11/18/16	254181	129.95-
00001 AUTO ARMATURE SERVICE IN 05397		00162594 16001074 BATTERY U#19815 POLICE	11/18/16	254181	116.95-
00001 AUTO ARMATURE SERVICE IN 05682		00162952 16001075 BATTERY U#18205 POLICE	11/18/16	254181	163.95-
00001 AUTO ARMATURE SERVICE IN 05735		00163014 16001076 ALTERNATOR U#17596 POLICE	11/18/16	254181	199.95-
00001 AUTO ARMATURE SERVICE IN 06259		00163787 16001077 BATTERY U#19118 POLICE	11/18/16	254181	131.95-
00001 AUTO ARMATURE SERVICE IN 06326		00163913 16001078 BATTERY/ALT U#18203 & 17577	11/18/16	254181	363.90-
00001 AUTO ARMATURE SERVICE IN 06505		00164195 16001079 BATTERY U#18323 POLICE	11/18/16	254181	163.95-
00001 AUTO ARMATURE SERVICE IN 07201		00165079 16001080 BATTERIES VARI POLICE UNITS	11/18/16	254181	705.75-
00001 AUTO ARMATURE SERVICE IN 07251		00165211 16001081 BATTERY U#15451 POLICE	11/18/16	254181	106.95-
00001 AUTO ARMATURE SERVICE IN 07471		00165608 16001082 BATTERIES U#17577 & 16654	11/18/16	254181	403.90-
00001 AUTO ARMATURE SERVICE IN 07523		00165685 16001083 BATTERIES VARI POLICE UNITS	11/18/16	254181	434.85-
00001 AUTO ARMATURE SERVICE IN 05337		00162475 16001084 BATTERY U#18326 POLICE	11/18/16	254181	163.95-
00001 AUTO ARMATURE SERVICE IN 05638		00162895 16001099 BATTERIES U#16083 SANIT	11/18/16	254181	428.85-

AUTO ARMATURE SERVICE IN					
Sum					3,675.80-
00001 AUTOMOTIVE GLASS SPECIAL I210363		00165215 16000899 WINDOW REGULATOR U#15451	11/18/16	254182	305.00-
00001 AUTOMOTIVE GLASS SPECIAL I210489		00165658 16001089 WINDSHIELD U#19930	11/18/16	254182	240.67-
00001 AUTOMOTIVE GLASS SPECIAL I211017		00162525 16001090 WINDSHIELD U#17836	11/18/16	254182	245.00-
00001 AUTOMOTIVE GLASS SPECIAL I210641		00165636 16001092 VENT/GLASS REPR U#16655	11/18/16	254182	175.00-

AUTOMOTIVE GLASS SPECIAL					
Sum					965.67-
00001 B & H PHOTO-VIDEO	117092493	00164008 16000985 CAMERA/VIDEO EQUIP FOR PR	11/18/16	254183	1,695.90-

B & H PHOTO-VIDEO					
Sum					1,695.90-
00001 BEECH, JANET	PO# 165514 1	00165514 16000697 ARTIFICIAL TREE ACCTG/PURCH	11/18/16	254187	42.79-

BEECH, JANET					
Sum					42.79-
00001 BIG IRON DIESEL REPAIR L R01274		00165182 16000865 REPRS U#16082 STREET	11/18/16	254189	2,849.82-

BIG IRON DIESEL REPAIR L					

Sum								2,849.82-
00001 BODY TECH INC	4750 PO#1650	00165080	16000827	REPRS U#18320	POLICE	11/18/16	254191	3,080.16-
BODY TECH INC								
Sum								3,080.16-
00001 BOURNE BROTHERS PRINTING	59100	00165691	16001070	VARI STAMPS	MUN COURT	11/18/16	254192	209.45-

BOURNE BROTHERS PRINTING								
Sum								209.45-
00001 BRACKMAN MOWER WAREHOUSE	21479	00165456	16000862	BAR OIL STREET	DEPT	11/18/16	254194	89.04-
00001 BRACKMAN MOWER WAREHOUSE	20070	00164583	16000866	REPR PTS U#18707/19280	STREET	11/18/16	254194	142.77-
00001 BRACKMAN MOWER WAREHOUSE	21528	00165508	16000886	TRIMMER REPR	HEALTH DIV	11/18/16	254194	86.60-
00001 BRACKMAN MOWER WAREHOUSE	21508	00165542	16000934	REPR PTS U#18707	STREET	11/18/16	254194	35.26-
00001 BRACKMAN MOWER WAREHOUSE	20059	00164576	16001095	WEEDEATER HARNESS	STREET DEPT	11/18/16	254194	57.08-
00001 BRACKMAN MOWER WAREHOUSE	15509	00162675	16001100	REPR PTS U#19292	HEALTH	11/18/16	254194	189.39-

BRACKMAN MOWER WAREHOUSE								
Sum								600.14-
00001 BRATCHER, ANITA	TRAV ADVANCE	00165526	16000704	TRAV ADV FTA	WRKSHOP ATLANTA	11/18/16	254195	633.80-

BRATCHER, ANITA								
Sum								633.80-
00001 BRUNINI	216287	00165664	16000820	SRVS 9/16	GENERAL-SSO'S	11/18/16	254197	26,123.63-

BRUNINI								
Sum								26,123.63-
00001 BUTLER, SNOW, O'MARA, STEVE	024154.11106	00165467	16000706	SRVS 2016	CONT DISCLOSURE STM	11/18/16	254198	3,000.00-

BUTLER, SNOW, O'MARA, STEVE								
Sum								3,000.00-
00001 C D W GOVERNMENT	FVX4559	00165261	16000994	STATE DRIVES	FOR SERVER	11/18/16	254199	2,740.79-

C D W GOVERNMENT								
Sum								2,740.79-
00001 C SPIRE (MEGAGATE)	205876-00 10	00165792	16000989	INET/NETWORK	10/16 INFO TECH	11/18/16	254200	14,437.40-

C SPIRE (MEGAGATE)								
Sum								14,437.40-
00001 CANON SOLUTIONS AMERICA	4020621165	00165768	16000950	COPIER MAINT	11/16 PURCHASING	11/18/16	254202	73.90-

CANON SOLUTIONS AMERICA								
Sum								73.90-
00001 CARQUEST AUTO PARTS STOR	14758-79048	00165461	16000867	REPR PTS U#7383	STREET	11/18/16	254203	60.01-
00001 CARQUEST AUTO PARTS STOR	14758-79150	00165545	16000868	REPR PTS U#14178	STREET	11/18/16	254203	45.33-
00001 CARQUEST AUTO PARTS STOR	14758-79055	00165247	16000876	OIL FILTER WRENCHES	SHOP	11/18/16	254203	33.17-
00001 CARQUEST AUTO PARTS STOR	14758-79056	00165247	16000877	REPR PTS U#14715	HEALTH	11/18/16	254203	342.51-
00001 CARQUEST AUTO PARTS STOR	14758-79152	00165541	16000890	ANTIFREEZE	CEMETERY SHOP	11/18/16	254203	293.28-
00001 CARQUEST AUTO PARTS STOR	14758-78632	00165208	16000998	REPRS U#14758	HALL LAND CODE	11/18/16	254203	295.32-
00001 CARQUEST AUTO PARTS STOR	14758-79527	00165725	16000999	REPRS U#19449	HALL LAND CODE	11/18/16	254203	101.94-

CARQUEST AUTO PARTS STOR								
Sum								1,171.56-
00001 CASSIDIAN COMMUNICATIONS	SINV00009326	00165638	16000817	REVERSE	911 MAINTENANCE	11/18/16	254205	11,630.00-

CASSIDIAN COMMUNICATIONS								-----
Sum								11,630.00-
00001	CERTIFIED LABORATORIES	2516115	00165765	16001017	SUPPLIES FOR SHOP	11/18/16	254208	4,829.00-

CERTIFIED LABORATORIES								
Sum								4,829.00-
00001	CHEMPRO SERVICES	5500	00159907	16001069	HERBICIDE SERVICES	11/18/16	254209	18,040.68-

CHEMPRO SERVICES								
Sum								18,040.68-
00001	CHIASSON, LOUIS N	410	00164890	16000825	OFFICE CUBICLES INVESTIGATION	11/18/16	254210	3,000.01-

CHIASSON, LOUIS N								
Sum								3,000.01-
00001	CITY OF HATTIESBURG FUND	TRF 1ST 11/1	00201752	16000894	TRF 1ST 11/16 PAYROLL	11/08/16	111348	881,830.85-
00001	CITY OF HATTIESBURG FUND	TRF INTERIM	00201798	16000948	TRF INTERIM 10/28 PAYROLL	11/10/16	111351	420.59-

CITY OF HATTIESBURG FUND								
Sum								882,251.44-
00001	CLARKE	5073431	00163675	16000878	CHEMICALS DRAINAGE DEPT	11/18/16	254215	3,420.00-

CLARKE								
Sum								3,420.00-
00001	COMCAST CABLEVISION OF H	095777456110	00165520	16000717	CONVERTER BOX LEASE	11/18/16	254220	17.86-
00001	COMCAST CABLEVISION OF H	095777456130	00165683	16000937	CABLE SERVICE PUBLIC WORKS	11/18/16	254220	66.27-
00001	COMCAST CABLEVISION OF H	095777456150	00165683	16000938	CABLE SERVICE SANIT DEPT	11/18/16	254220	133.30-

COMCAST CABLEVISION OF H								
Sum								217.43-
00001	COMPREHENSIVE RADIOLOGY	179504 BRISC	00165535	16000739	SRV 8/18/16 BRISCO PRISONER	11/18/16	254221	37.00-
00001	COMPREHENSIVE RADIOLOGY	126108 DOVIE	00165623	16000844	SRV 11/15-6/16 SMITH PRISONER	11/18/16	254221	1,105.00-
00001	COMPREHENSIVE RADIOLOGY	ICRS125523 B	00165623	16000845	SRV 7/9/16 BARRETT PRISONER	11/18/16	254221	242.00-
00001	COMPREHENSIVE RADIOLOGY	ICRS125523 B	00165623	16000846	SRV 7/9/16 BARRETT PRISONER	11/18/16	254221	244.00-
00001	COMPREHENSIVE RADIOLOGY	ICRS3496 YOU	00165623	16000847	SRV 6/22/16 YOUNG PRISONER	11/18/16	254221	150.00-
00001	COMPREHENSIVE RADIOLOGY	ICRS167428 S	00165623	16000848	SRV 6/9/16 SHELBY PRISONER	11/18/16	254221	37.00-
00001	COMPREHENSIVE RADIOLOGY	ICRS167428	00165623	16000849	SRV 6/9/16 SHELBY PRISONER	11/18/16	254221	412.00-

COMPREHENSIVE RADIOLOGY								
Sum								2,227.00-
00001	COURT PROGRAMS INC	INV #26	00165836	16001012	ANKLE MONITORS 11/15 COURT	11/18/16	254223	6,595.00-

COURT PROGRAMS INC								
Sum								6,595.00-
00001	COURTESY MOTORS INC	454588	00165609	16000869	REPR PTS U#16237 STREET	11/18/16	254224	69.77-
00001	COURTESY MOTORS INC	215012	00164661	16001014	OIL CHANGE U#17257 FED/STATE	11/18/16	254224	38.87-

COURTESY MOTORS INC								
Sum								108.64-
00001	D P S CRIME LAB	90056266	00165738	16000931	FIRE SCENE EVIDENCE ANALYSIS	11/18/16	254228	60.00-
00001	D P S CRIME LAB	90056267	00165800	16000996	ANALYTICAL FEES FOR LAB	11/18/16	254228	600.00-

D P S CRIME LAB								
Sum								660.00-
00001	DAKTECH COMPUTERS	INV0327283(A	00163395	16000896	COMPUTERS MUN COURT	11/18/16	254229	20,343.00-
00001	DAKTECH COMPUTERS	INV0327283(B	00164059	16000897	KEYBOARDS MUN COURT	11/18/16	254229	735.00-
00001	DAKTECH COMPUTERS	INV0328209	00165174	16000952	DESKTOP COMPUTERS INFO TECH	11/18/16	254229	6,920.00-

DAKTECH COMPUTERS								
Sum								27,998.00-
00001	DENSON OIL COMPANY INC	99489	00165679	16000918	DIESEL FOR FUEL STATION	11/18/16	254231	4,949.40-

DENSON OIL COMPANY INC								
Sum								4,949.40-
00001	DONALDSON, DENISE	PO#165470 10	00165470	16000723	HALLOWEEN PARADE CANDY	11/18/16	254232	42.64-

DONALDSON, DENISE								
Sum								42.64-
00001	ELITE SCREEN PRINTING	16696	00165231	16000831	SHIRTS P/F ACDMY INSTRUCTOR	11/18/16	254235	344.00-

ELITE SCREEN PRINTING								
Sum								344.00-
00001	EMERGENCY EQUIPMENT PROF	422978	00165357	16000725	SCBA EQUIPMENT	11/18/16	254237	3,926.00-
00001	EMERGENCY EQUIPMENT PROF	422977	00165285	16000727	8 FT PIKE POLE	11/18/16	254237	65.00-
00001	EMERGENCY EQUIPMENT PROF	423005	00165773	16000962	REPRS U#13932 FIRE DEPT	11/18/16	254237	1,020.00-
00001	EMERGENCY EQUIPMENT PROF	423268	00165452	16001016	FIRE HELMET REPR PTS	11/18/16	254237	1,105.53-

EMERGENCY EQUIPMENT PROF								
Sum								6,116.53-
00001	EMERGENCY MANAGEMENT DIS	CONTRIB Q/E	00165690	16000911	CONTRIB Q/E 12/31/16	11/18/16	254238	25,250.00-

EMERGENCY MANAGEMENT DIS								
Sum								25,250.00-
00001	EMPIRE TRUCK SALES (H'BU	RE006024415:	00165711	16000980	REPRS U#204361 SANIT	11/18/16	254239	236.25-
00001	EMPIRE TRUCK SALES (H'BU	RE006024416:	00165756	16000981	REPRS U#20072 SANIT	11/18/16	254239	427.54-

EMPIRE TRUCK SALES (H'BU								
Sum								663.79-
00001	FARRIS, JONATHAN M ATTOR	20276	00165842	16001013	SERVS 8/9-10/11/16 COURT	11/18/16	254244	1,210.00-

FARRIS, JONATHAN M ATTOR								
Sum								1,210.00-
00001	FASTENAL COMPANY	MSHAT194622	00165471	16000884	CHEMICAL RESIISTANT GLOVES	11/18/16	254245	39.85-
00001	FASTENAL COMPANY	MSHAT194756	00165584	16000908	HAND TRUCK CONSTR DEPT	11/18/16	254245	83.88-
00001	FASTENAL COMPANY	MSHAT194782	00165603	16000963	NUTS/BOLTS TRAFFIC STOCK	11/18/16	254245	348.20-
00001	FASTENAL COMPANY	MSHAT194784	00165469	16000978	RAIN JACKETS/BOOTS CONSTR	11/18/16	254245	102.05-
00001	FASTENAL COMPANY	MSHAT194920	00165759	16001096	WORK GLOVES PUBLIC WORKS	11/18/16	254245	345.96-
00001	FASTENAL COMPANY	MSHAT194951	00165692	16001098	MARKING PAINT PUBLIC WORKS	11/18/16	254245	118.56-

FASTENAL COMPANY								
Sum								1,038.50-
00001	FEDERAL EXPRESS	5-590-09244	00165654	16000875	SRV 10/17,10/19,10/20 ENGR	11/18/16	254247	59.23-

00001	FEDERAL EXPRESS	5-597-32409	00165742	16000939	SERV 10/24,10/26 ENGR DEPT	11/18/16	254247	45.72-

FEDERAL EXPRESS								
Sum								104.95-
00001	FORREST GENERAL HOSPITAL	H90061258300	00165546	16000741	SRV 8/16/16 GALES PRISONER	11/18/16	254250	9,992.00-
00001	FORREST GENERAL HOSPITAL	H90061402800	00165546	16000742	SRV 8/18/16 BRISCO PRISONER	11/18/16	254250	2,683.00-
00001	FORREST GENERAL HOSPITAL	H90061395700	00165546	16000743	SRV 8/17/16 FORET PRISONER	11/18/16	254250	18,514.50-
00001	FORREST GENERAL HOSPITAL	H90059308701	00165620	16000850	SRV 7/9/16 BARRETT PRISONER	11/18/16	254250	5,178.00-
00001	FORREST GENERAL HOSPITAL	H90058419701	00165620	16000851	SRV 6/22/16 YOUNG PRISONER	11/18/16	254250	2,620.00-
00001	FORREST GENERAL HOSPITAL	H90058816900	00165620	16000852	SRV 6/30/16 GARDENER PRISONER	11/18/16	254250	9,254.65-
00001	FORREST GENERAL HOSPITAL	H90059328601	00165620	16000853	SRV 7/10/16 BARRETT PRISONER	11/18/16	254250	1,010.00-

FORREST GENERAL HOSPITAL								
Sum								49,252.15-
00001	FORREST GENERAL HOSPITAL	P801789651 B	00165536	16000740	SRV 8/01/16 BETTS PRISONER	11/18/16	254251	220.00-

FORREST GENERAL HOSPITAL								
Sum								220.00-
00001	FORREST GENERAL HOSPITAL	EAP CHARGE 1	00165590	16000821	EAP CHARGE 11/16	11/18/16	254252	1,785.00-

FORREST GENERAL HOSPITAL								
Sum								1,785.00-
00001	FUELMAN OF MS	BG127044 NP4	00165504	16000709	FUEL CHGS 10/10-16/16 POLICE	11/18/16	254254	30.20-
00001	FUELMAN OF MS	BG127044 NP4	00165737	16000921	FUEL CHG 10/28 TOWNSEND	11/18/16	254254	19.10-
00001	FUELMAN OF MS	BG127044 NP4	00165660	16000959	FUEL CHG 10/30 MORGAN FIRE	11/18/16	254254	47.16-
00001	FUELMAN OF MS	BG127044 NP4	00165660	16000960	FUEL CHG 11/3 MORGAN FIRE	11/18/16	254254	18.60-
00001	FUELMAN OF MS	BG127044 NP4	00165855	16001047	FUEL CHGS 10/24-30/16 POLICE	11/18/16	254254	62.27-

FUELMAN OF MS								
Sum								177.33-
00001	FV RECYCLING	2016-3110	00165440	16000768	RECYCLE FEES 10/16	11/18/16	254255	116.50-
00001	FV RECYCLING	2016-3136	00165440	16000769	RECYCLE FEES 10/16 SANIT	11/18/16	254255	38.50-
00001	FV RECYCLING	2016-3171	00165717	16000942	RECYCLE FEES 10/16 SANIT	11/18/16	254255	109.25-
00001	FV RECYCLING	2016-3236	00165717	16000943	RECYCLE FEES 11/16 SANIT	11/18/16	254255	43.00-

FV RECYCLING								
Sum								307.25-
00001	G & K SERVICES	1035776986	00165530	16000778	UNIFORMS 10/31 TRAFFIC	11/18/16	254263	23.76-
00001	G & K SERVICES	1035776985	00165530	16000779	UNIFORMS 10/31 CONSTR	11/18/16	254263	49.47-
00001	G & K SERVICES	1035777001	00165530	16000780	UNIFORMS 10/31 PUBLIC WORKS	11/18/16	254263	70.20-
00001	G & K SERVICES	1035776998	00165530	16000782	UNIFORMS 10/31 PUBLIC WORKS	11/18/16	254263	27.30-
00001	G & K SERVICES	1035777002	00165530	16000783	UNIFORMS 10/31 SHOP	11/18/16	254263	47.86-
00001	G & K SERVICES	1035776999	00165530	16000784	UNIFORMS 10/31 SANIT	11/18/16	254263	152.11-
00001	G & K SERVICES	1035777003	00165530	16000785	UNIFORMS 10/31 HEALTH	11/18/16	254263	64.01-
00001	G & K SERVICES	1035776987	00165531	16000786	MATS 10/31 TRAFFIC	11/18/16	254263	6.40-
00001	G & K SERVICES	1035777004	00165531	16000787	MOP/MAT 10/31 GO&FS	11/18/16	254263	24.80-
00001	G & K SERVICES	1035777005	00165531	16000788	MOP/MAT 10/31 SANIT	11/18/16	254263	16.65-
00001	G & K SERVICES	1035777006	00165531	16000789	MATS 10/31 AIRPORT	11/18/16	254263	4.70-
00001	G & K SERVICES	1035768112	00165481	16000790	UNIFORMS 10/03 CEM/FORESTRY	11/18/16	254263	49.64-
00001	G & K SERVICES	1035770364	00165481	16000791	UNIFORMS 10/10 CEM/FORESTRY	11/18/16	254263	49.64-
00001	G & K SERVICES	1035772572	00165481	16000792	UNIFORMS 10/17 CEM/FORESTRY	11/18/16	254263	49.64-
00001	G & K SERVICES	1035774784	00165481	16000793	UNIFORMS 10/24 CEM/FORESTRY	11/18/16	254263	49.64-

00001 GLOBAL SECURITY INVESTIG SECURITY DET 02017105 16001043 SECURITY DETAIL RFD 10/5	11/18/16	254269	192.50-

GLOBAL SECURITY INVESTIG			
Sum			192.50-
00001 GULF COAST OFFICE PRODUC 27066-0 00165604 16000951 OFFICE SUPP PLANNING DEPT	11/18/16	254271	230.69-

GULF COAST OFFICE PRODUC			
Sum			230.69-
00001 H'BURG CLINIC PA (ACCT#2 1028000103 4 00165858 16001048 PSY TESTS FOR HPD RECRUITS	11/18/16	254275	4,125.00-

H'BURG CLINIC PA (ACCT#2			
Sum			4,125.00-
00001 H'BURG CLINIC PA (PRISON 1077982030 B 00165538 16000744 SRV 8/01/16 BETTS PRISONER	11/18/16	254274	294.00-
00001 H'BURG CLINIC PA (PRISON 1077982040 B 00165538 16000745 SRV 8/2-3/16 BETTS PRISONER	11/18/16	254274	269.00-
00001 H'BURG CLINIC PA (PRISON 395833 BRISC 00165538 16000746 SRV 8/18/16 BRISCO PRISONER	11/18/16	254274	105.00-
00001 H'BURG CLINIC PA (PRISON 1077253730 C 00165622 16000854 SRV 7/1/16 CROMWELL PRISONER	11/18/16	254274	220.00-
00001 H'BURG CLINIC PA (PRISON 1073825750 H 00165622 16000855 SRV 5/10/16 HUTCHINS PRISONER	11/18/16	254274	15.00-
00001 H'BURG CLINIC PA (PRISON 1073825760 M 00165622 16000856 SRV 5/10/16 MOTLEY PRISONER	11/18/16	254274	30.00-

H'BURG CLINIC PA (PRISON			
Sum			933.00-
00001 H'BURG COCA COLA BOTTLIN 1097212589 00165059 16000983 BOTTLED WTR/POWERADE M/ADM	11/18/16	254276	111.50-

H'BURG COCA COLA BOTTLIN			
Sum			111.50-
00001 H'BURG HYDRAULICS INC 66831 00165433 16000766 REPR PTS U#15892 SANIT	11/18/16	254277	306.60-
00001 H'BURG HYDRAULICS INC 66814 00165392 16000774 REPLACE HYD HOSE U#11995 CEM	11/18/16	254277	844.65-

H'BURG HYDRAULICS INC			
Sum			1,151.25-
00001 HALLS WELDING SERVICE 30284 00165486 16000764 REPRS U#15893 SANIT	11/18/16	254278	130.00-

HALLS WELDING SERVICE			
Sum			130.00-
00001 HARBOR FREIGHT 779334 00165432 16000976 COMPACTOR PUBLIC WORKS	11/18/16	254280	1,649.97-

HARBOR FREIGHT			
Sum			1,649.97-
00001 HATTIESBURG AMERICAN-ACC H17770 54886 00160791 16000836 FIRE RECRUIT ADS	11/18/16	254273	1,820.60-
00001 HATTIESBURG AMERICAN-ACC H12998 56818 00165893 16001045 CITY WIDE ADS AND NOTICES	11/18/16	254273	784.82-

HATTIESBURG AMERICAN-ACC			
Sum			2,605.42-
00001 HILL, LEROY COFFEE CO IN 697076 00165663 16000812 COFFEE SERV M/ADM	11/18/16	254284	12.23-
00001 HILL, LEROY COFFEE CO IN 697238 00165663 16000813 COFFEE SERV M/ADM	11/18/16	254284	80.17-

HILL, LEROY COFFEE CO IN			
Sum			92.40-
00001 INDOFF INC 2873620 00165368 16000721 PRINTER/INK #5 FIRE STA	11/18/16	254286	182.01-
00001 INDOFF INC 2872822 00165287 16000722 JANIT/OFFICE SUPP FIRE ADM	11/18/16	254286	328.40-
00001 INDOFF INC 2873420 00165324 16000761 PRINTER INK PUBLIC WORKS	11/18/16	254286	173.92-

00001 INDOFF INC	2873422	00165324 16000762	PRINTER INK PUBLIC WORKS	11/18/16	254286	410.95-
00001 INDOFF INC	2875300	00165428 16000901	OFFICE SUPP FIRE ADM	11/18/16	254286	100.41-
00001 INDOFF INC	2876124	00165475 16000909	OFFICE SUPP CEMETERY	11/18/16	254286	303.41-
00001 INDOFF INC	2839608	00164557 16001039	PRINTER SUPP CEMETERY	11/18/16	254286	39.50-

INDOFF INC						
Sum						1,538.60-
00001 INSIGHT PUBLIC SECTOR	1100505258	00165562 16000957	ANTENNAS POLICE CAR MODEMS	11/18/16	254288	474.60-

INSIGHT PUBLIC SECTOR						
Sum						474.60-
00001 INTERACT PUBLIC SAFETY S	MN0000007180	00165879 16001050	INTERACT MAINT 2017	11/18/16	254289	24,635.99-

INTERACT PUBLIC SAFETY S						
Sum						24,635.99-
00001 INTL ASSN OF FIRE CHIEFS	90851 PRESLE	00165451 16000734	2017 MBRSHP PRESLEY	11/18/16	254290	219.00-
00001 INTL ASSN OF FIRE CHIEFS	124777 WILSO	00165451 16000735	2017 MBRSHP WILSON	11/18/16	254290	244.00-

INTL ASSN OF FIRE CHIEFS						
Sum						463.00-
00001 IRBY, STUART C CO	S009839736.0	00164934 16000772	RUNWAY LIGHTS AIRPORT	11/18/16	254291	1,980.00-
00001 IRBY, STUART C CO	S009777916.0	00164892 16000912	MATLS LIFE BLDG PROJECT	11/18/16	254291	194.00-
00001 IRBY, STUART C CO	S009777916.0	00164892 16000913	MATLS LIFE BLDG PROJECT	11/18/16	254291	1,825.70-

IRBY, STUART C CO						
Sum						3,999.70-
00001 JACKSON COMMUNICATIONS	S17101	00165021 16000729	FREIGHT CHARGE	11/18/16	254292	16.00-

JACKSON COMMUNICATIONS						
Sum						16.00-
00001 JACKSON, ROOSEVELT III	PO#164696 11	00164696 16000922	PRESSURE WASH OUTSIDE T DEPOT	11/18/16	254293	4,785.00-

JACKSON, ROOSEVELT III						
Sum						4,785.00-
00001 KRISPY KREME DOUGHNUT CO	2831256	00165339 16000895	FOOD WARD 2 MEETING 10/27/16	11/18/16	254300	82.98-

KRISPY KREME DOUGHNUT CO						
Sum						82.98-
00001 KRONOS INCORPORATED	11116287	00165772 16000953	SOFTWARE SUPPORT SERVICES	11/18/16	254301	9,088.00-

KRONOS INCORPORATED						
Sum						9,088.00-
00001 LARD OIL COMPANY	0809416-IN	00165774 16001101	MOTOR OIL FOR SHOP	11/18/16	254303	640.18-

LARD OIL COMPANY						
Sum						640.18-
00001 LARRY'S WRECKER SERVICE	1527	00165380 16000870	TOWING U#14498 STREET	11/18/16	254304	65.00-

LARRY'S WRECKER SERVICE						
Sum						65.00-
00001 LAUREL MACHINE & FOUNDRY	522736	00165533 16000940	WELDING SUPP SHOP	11/18/16	254305	3,467.90-

LAUREL MACHINE & FOUNDRY						

[illegible]

00001 MOLLY MAID	SERVICES 11/	00165697	16000910	SERVS 11/16 HILND CEM OFFICE	11/18/16	254328	245.00-

MOLLY MAID							
Sum							245.00-
00001 MOORE'S BICYCLE SHOP INC	PO#162519 7/	00162519	16000955	BIKE REPR PTS POLICE DEPT	11/18/16	254329	56.99-
00001 MOORE'S BICYCLE SHOP INC	PO#162301	00162301	16000956	HELMETS TRAFFIC DIV	11/18/16	254329	120.00-

MOORE'S BICYCLE SHOP INC							
Sum							176.99-
00001 MOORE'S LOCK AND KEY LLC	21941	00165780	16000958	CHANGE LOCKS P/F ACDMY DOORS	11/18/16	254330	143.85-

MOORE'S LOCK AND KEY LLC							
Sum							143.85-
00001 MR. SIPPI BEVERAGES	166208 ADDL	00165502	16000714	DRINKING WATER BOTTLE DEPOSIT	11/18/16	254331	24.00-
00001 MR. SIPPI BEVERAGES	554185 ADDL	00165502	16000715	DRINKING WATER BOTTLE DEPOSIT	11/18/16	254331	84.00-
00001 MR. SIPPI BEVERAGES	079683 ADDL	00165502	16000716	FUEL SURCHARGE	11/18/16	254331	188.15-
00001 MR. SIPPI BEVERAGES	151786	00165724	16000926	DRINKING WATER POLICE DEPT	11/18/16	254331	171.25-
00001 MR. SIPPI BEVERAGES	030967	00165724	16000927	DRINKING WATER POLICE DEPT	11/18/16	254331	213.50-
00001 MR. SIPPI BEVERAGES	088087	00165799	16000995	DRINKING WATER POLICE DEPT	11/18/16	254331	185.90-

MR. SIPPI BEVERAGES							
Sum							866.80-
00001 MS BUSINESS JOURNAL	SUBSCRIPT RN	00165936	16001071	SUBSCRIPT RNWL MAYOR DUPREE	11/18/16	254332	109.00-
MS BUSINESS JOURNAL							
Sum							109.00-
00001 MS DELTA COMM.COLLEGE LA	REG JOHNSON	00164373	16000929	REG JOHNSON INSTRUCTOR COURSE	11/18/16	254333	50.00-

MS DELTA COMM.COLLEGE LA							
Sum							50.00-
00001 MS DEPT OF INFORMATION T	90055956	00165453	16000707	CONSULTANT FOR KRONOS	11/18/16	254334	310.80-
00001 MS DEPT OF INFORMATION T	IN 601 COH19	00201774	16000804	LONG DISTANCE 10/16 VARI DEPTS	11/18/16	254334	14,074.27-
00001 MS DEPT OF INFORMATION T	COZ272272364	00201787	16000917	NCIC MAINT 10/16 POLICE	11/18/16	254334	224.00-

MS DEPT OF INFORMATION T							
Sum							14,609.07-
00001 MS EMBROIDERY COMPANY	12055	00164553	16000736	SHIRTS CODE ENFORCEMENT OFCRS	11/18/16	254335	271.60-
00001 MS EMBROIDERY COMPANY	E 10801	00155660	16000933	SHIRTS RUSSELL/HALL LAND CODE	11/18/16	254335	327.30-

MS EMBROIDERY COMPANY							
Sum							598.90-
00001 MS FIRE INVESTIGATORS AS	REG MOONEY 1	00165560	16000837	REG MOONEY SMNR NATCHEZ	11/18/16	254336	150.00-
00001 MS FIRE INVESTIGATORS AS	REG DONALDSON	00165560	16000838	REG DONALDSON SMNR NATCHEZ	11/18/16	254336	150.00-
00001 MS FIRE INVESTIGATORS AS	REG COLLINS	00165560	16000839	REG COLLINS SMNR NATCHEZ	11/18/16	254336	150.00-

MS FIRE INVESTIGATORS AS							
Sum							450.00-
00001 MS GRASS NURSERY	28166	00165400	16000753	BERMUDA GRASS 106 SARATOGA CR	11/18/16	254337	130.00-
00001 MS GRASS NURSERY	28183	00165558	16000863	BERMUDA GRASS SOUTHERN AVE	11/18/16	254337	130.00-

MS GRASS NURSERY							
Sum							260.00-

00001 MS MUNICIPAL LIABILITY P 7354	00165567 16000822 LIABILITY COVERAGE 1/17-12/17	11/18/16	254338	445,915.00-

MS MUNICIPAL LIABILITY P				
Sum				445,915.00-
00001 MS POWER COMPANY	11/16 GENERA 00020173 16001041 MNTHLY ELEC-GENERAL	11/18/16	254339	16,994.71-

MS POWER COMPANY				
Sum				16,994.71-
00001 MS STATE/TREASURER/FINAN FINE COLLECT	00201780 16000777 FINE COLLECTIONS 10/16	11/03/16	111343	53,372.96-

MS STATE/TREASURER/FINAN				
Sum				53,372.96-
00001 N & H ELECTRONIC DISTRIB 164663	00165206 16000712 TIES FOR EVIDENCE BAGS	11/18/16	254341	43.96-

N & H ELECTRONIC DISTRIB				
Sum				43.96-
00001 NAPA AUTO PARTS	553670 00165501 16000724 DIESEL EXHAUST FLUID	11/18/16	254342	80.88-
00001 NAPA AUTO PARTS	553694 00165524 16000726 BLDG MAINT SUPP	11/18/16	254342	63.67-
00001 NAPA AUTO PARTS	553994 00165739 16000930 REPR PTS VARI FIRE UNITS	11/18/16	254342	108.09-

NAPA AUTO PARTS				
Sum				252.64-
00001 NATL LEAGUE OF CITIES/DI 123821 MBR#2	00165825 16000993 2017 MBRSH P DUES	11/18/16	254344	3,813.00-

NATL LEAGUE OF CITIES/DI				
Sum				3,813.00-
00001 NATL ORG OF BLACK LAW EN 12648 SIMS 2	00165601 16000830 2017 MBRSH P DUES MAJOR SIMS	11/18/16	254345	150.00-

NATL ORG OF BLACK LAW EN				
Sum				150.00-
00001 NATL RIFLE ASSN (LEAD)	000152131924 00165662 16000833 MBRSH P DUES FONTAINE	11/18/16	254346	85.00-
00001 NATL RIFLE ASSN (LEAD)	000131405250 00165781 16000961 MBRSH P DUES JOHNSON	11/18/16	254346	100.00-

NATL RIFLE ASSN (LEAD)				
Sum				185.00-
00001 NEBLETT'S FRAME OUTLET	948369 00164678 16000694 FRAMING FOR MAYOR'S OFFICE	11/18/16	254348	444.80-

NEBLETT'S FRAME OUTLET				
Sum				444.80-
00001 NEEL-SCHAFFER INC	1041008 00165801 16001003 SERVS MS4 PROGRAM MANAGEMENT	11/18/16	254349	4,950.00-

NEEL-SCHAFFER INC				
Sum				4,950.00-
00001 NEWELL PAPER COMPANY	884024 00165058 16000701 JANIT SUPP CITY HALL/ENGR	11/18/16	254351	471.41-
00001 NEWELL PAPER COMPANY	885024 00165700 16001001 JANIT SUPP PUBLIC WORKS	11/18/16	254351	174.76-
00001 NEWELL PAPER COMPANY	884746 00165611 16001038 JANIT SUPP POLICE DEPT	11/18/16	254351	77.64-

NEWELL PAPER COMPANY				
Sum				723.81-
00001 OFFICE DEPOT INC	873612734001 00165235 16000699 PHONE CORDS INFO TECH	11/18/16	254354	17.80-
00001 OFFICE DEPOT INC	872654145001 00165097 16000708 RECEIPT PAPER FOR FRONT DESK	11/18/16	254354	36.69-
00001 OFFICE DEPOT INC	2002971999 00165639 16000988 COMPUTER SUPP INFO TECH	11/18/16	254354	979.09-

OFFICE DEPOT INC								-----
Sum								1,033.58-
00001	ORION PLANNING GROUP	2177	00165793	16000987	CONSULTING 10/16	LAND CODE	11/18/16 254355	280.00-

ORION PLANNING GROUP								
Sum								280.00-
00001	OVERHEAD DOOR CO OF HBUR	78113	00165300	16000732	BAY DOOR REPR #1	FIRE STA	11/18/16 254356	229.75-
00001	OVERHEAD DOOR CO OF HBUR	77145	00163733	16000834	BAY DOOR REMOTE #1	FIRE STA	11/18/16 254356	185.00-

OVERHEAD DOOR CO OF HBUR								
Sum								414.75-
00001	OWENS BUSINESS MACHINES	319457	00165466	16000695	COPIER 11/16	M/ADM	11/18/16 254357	187.00-
00001	OWENS BUSINESS MACHINES	319458	00165466	16000696	COPIER 10/16	M/ADM	11/18/16 254357	66.65-

OWENS BUSINESS MACHINES								
Sum								253.65-
00001	PALM PROPERTY DEVELOPMEN	MB#2014/198-	00201769	16000802	DL RENEWAL STATION	LEASE PYMT	11/18/16 254358	1,100.00-
00001	PALM PROPERTY DEVELOPMEN	MB#2014/198-	00201770	16000803	DL RENEWAL SATION	OLEASE PYMT	11/18/16 254358	1,100.00-

PALM PROPERTY DEVELOPMEN								
Sum								2,200.00-
00001	PARKER, ANDY (USE 83107-	PETTY CASH 1	00165578	16000891	PETTY CASH CEMETERY/FORESTRY		11/18/16 254359	106.24-

PARKER, ANDY (USE 83107-								
Sum								106.24-
00001	PEARL RIVER VALLEY EPA (	11/16 GENERA	00020176	16001040	MNTHLY 11/16	PUBLIC SERVICES	11/18/16 254361	6,371.18-

PEARL RIVER VALLEY EPA (								
Sum								6,371.18-
00001	PERFORMANCE RESCUE	PO#164567 FR	00164567	16000731	FREIGHT CHARGE		11/18/16 254363	100.00-

PERFORMANCE RESCUE								
Sum								100.00-
00001	PINE BELT MENTAL HEALTHC	OCT-16	00165886	16001044	JAIL DIVERSION GRANT	10/16	11/18/16 254368	1,346.76-

PINE BELT MENTAL HEALTHC								
Sum								1,346.76-
00001	PINE BELT OIL COMPANY IN	10434315	00164893	16000690	GAS FOR FUEL STATION		11/18/16 254369	9,525.69-
00001	PINE BELT OIL COMPANY IN	1055730	00164893	16000691	DIESEL FOR FUEL STATION		11/18/16 254369	5,059.32-
00001	PINE BELT OIL COMPANY IN	EMR MGT-MINI	00165665	16000805	REMOTE SITE FUEL CHGS	10/16	11/18/16 254369	754.54-
00001	PINE BELT OIL COMPANY IN	POLICE 10/1-	00165665	16000806	REMOTE SITE FUEL CHGS	10/16	11/18/16 254369	774.94-
00001	PINE BELT OIL COMPANY IN	FIRE 10/1-31	00165665	16000807	REMOTE SITE FUEL CHGS	10/16	11/18/16 254369	1,051.81-
00001	PINE BELT OIL COMPANY IN	10313891	00164792	16000808	GAS FOR FUEL STATION		11/18/16 254369	11,123.94-
00001	PINE BELT OIL COMPANY IN	10435081	00164792	16000809	DIESEL FOR FUEL STATION		11/18/16 254369	7,904.50-
00001	PINE BELT OIL COMPANY IN	10435411	00165485	16000810	GAS/DIESEL FOR FUEL STATION		11/18/16 254369	15,830.63-

PINE BELT OIL COMPANY IN								
Sum								52,025.37-
00001	PINE BELT READY MIX CONC	493368	00164754	16000879	CONCRETE PINE & MOBILE ST		11/18/16 254370	820.00-
00001	PINE BELT READY MIX CONC	493925	00164754	16000880	CONCRETE PINE & MOBILE ST		11/18/16 254370	307.50-
00001	PINE BELT READY MIX CONC	493930	00164754	16000881	CONCRETE PINE & MOBILE ST		11/18/16 254370	256.25-

00001	PINE BELT READY MIX CONC	495332	00164754	16000882	CONCRETE PINE & MOBILE ST	11/18/16	254370	615.00-
00001	PINE BELT READY MIX CONC	496660	00164820	16001005	CONCRETE CITY WIDE USE	11/18/16	254370	1,640.00-
00001	PINE BELT READY MIX CONC	496669	00164820	16001006	CONCRETE CITY WIDE USE	11/18/16	254370	512.50-
00001	PINE BELT READY MIX CONC	497493	00164820	16001007	CONCRETE CITY WIDE USE	11/18/16	254370	358.75-
00001	PINE BELT READY MIX CONC	497604	00164820	16001008	CONCRETE CITY WIDE USE	11/18/16	254370	512.50-

PINE BELT READY MIX CONC								
Sum								
00001	PINE BELT REGIONAL SOLID	100006 10/16	00165740	16000944	REFUSE DISPOSAL SANIT	11/18/16	254371	5,022.50-
								35,093.97-

PINE BELT REGIONAL SOLID								
Sum								
00001	POLICE EQUIPMENT WORLDWI	5123	00163063	16000711	MTRCYCLE BREECHES FOR STOCK	11/18/16	254375	35,093.97-
								4,018.80-

POLICE EQUIPMENT WORLDWI								
Sum								
00001	PUCKETT MACHINERY COMPAN	P05C5613603	00165181	16000757	REPR PTS U#20093 STREET	11/18/16	254377	4,018.80-
								98.44-

PUCKETT MACHINERY COMPAN								
Sum								
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165310	16001020	AT&T U-VERSE 9/6-10/5 MAYOR	11/18/16	254379	98.44-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165394	16001021	REG DUPREE 1/17-19/17 CONF	11/18/16	254379	65.00-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165754	16001022	SUPP AS400 TRNING CITY WIDE	11/18/16	254379	650.00-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165294	16001023	WORLD MAP ON CANVAS	11/18/16	254379	164.22-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165013	16001024	INFO RECOVERY SOFTWARE	11/18/16	254379	79.99-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165109	16001025	SOFTWARE WEBSITE DEVELOPMENT	11/18/16	254379	59.00-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165830	16001026	HOTEL EATON 9/26-27 CLERK MTG	11/18/16	254379	100.79-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165834	16001027	LATE FEE AND PREVIOUS CHARGES	11/18/16	254379	281.22-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00164850	16001028	CANOPY/SUPP MOBILE ST FESTIVL	11/18/16	254379	1,720.47-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165104	16001029	CLOTH ALLOW HOLLIMAN POLICE	11/18/16	254379	95.23-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165403	16001030	CLOTH ALLOW DUNAWAY POLICE	11/18/16	254379	382.72-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165377	16001031	REFRSHMNTS AGENCIES/GUESTS	11/18/16	254379	421.60-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165743	16001032	EXPNS FONTAINE 10/10-11 OXFRD	11/18/16	254379	121.83-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165751	16001033	EXPN RICHARDSON 10/10-11 OXFD	11/18/16	254379	345.25-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165750	16001034	EXPN BURHAM TRNG 9/26 FLA	11/18/16	254379	337.30-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165755	16001035	EXPN MORGAN/BURNHAM 10/31	11/18/16	254379	537.29-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00164962	16001036	HOTEL MACE CONF (4) 10/13-14	11/18/16	254379	37.27-
00001	REGIONS CARDHOLDER SERVI	7079 10/31/1	00165283	16001037	HOTEL ADDL NIGHT MACE CONF	11/18/16	254379	356.00-
								1,219.60-

REGIONS CARDHOLDER SERVI								
Sum								
00001	RICOH CORP	5045224894 G	00165618	16000811	PRODUCTION PRINTER CHARGES	11/18/16	254380	6,974.78-
00001	RICOH CORP	21554385	00165671	16000815	COPIER 7/15-8/14 HUMAN RES	11/18/16	254380	578.61-
00001	RICOH CORP	21583726	00165667	16000840	COPIER 8/16 LAND CODE	11/18/16	254380	221.67-
00001	RICOH CORP	21717054	00165667	16000841	COPIER 9/16 LAND CODE	11/18/16	254380	110.00-
00001	RICOH CORP	21849403	00165667	16000842	COPIER 10/16 LAND CODE	11/18/16	254380	110.00-
00001	RICOH CORP	21979998	00165667	16000843	COPIER 11/16 LAND CODE	11/18/16	254380	110.00-

RICOH CORP								
Sum								
00001	RJ YOUNG COMPANY	INV1586058	00165518	16000693	COPIER 9/25-10/24 COURT	11/18/16	254381	1,240.28-
00001	RJ YOUNG COMPANY	INV1587054	00165552	16000720	COPIER 9/28-10/27 DETECTIVES	11/18/16	254381	335.00-
								492.00-

00001 RJ YOUNG COMPANY	INV1595480	00165543 16000733	COPIER 9/28-10/27 FIRE DEPT	11/18/16	254381	523.85-
00001 RJ YOUNG COMPANY	INV1595479	00165596 16000832	COPIER 9/28-10/27 P/F ACDMY	11/18/16	254381	318.64-
00001 RJ YOUNG COMPANY	INV1487536	00165907 16001073	COPIER 7/14-8/13/16 CITY CLK	11/18/16	254381	298.00-

RJ YOUNG COMPANY						
Sum						1,967.49-
00001 ROPER SUPPLY CO LLC	48424	00162433 16000713	PUSH BUMPERS FOR NEW UNITS	11/18/16	254385	1,187.70-

ROPER SUPPLY CO LLC						
Sum						1,187.70-
00001 ROSE'S QUIK STOP	PO#165870 11	00165870 16001052	MEALS PROMO INTERVIEW BOARD	11/18/16	254386	125.30-

ROSE'S QUIK STOP						
Sum						125.30-
00001 RUSSELL, CALVIN	TRAV ADVANCE	00165525 16000705	TRAV ADV FTA WRKSHOP ATLANTA	11/18/16	254387	708.80-

RUSSELL, CALVIN						
Sum						708.80-
00001 RYAN MOTORS INC	210457	00165610 16000935	REPR PTS U#11302 STREET	11/18/16	254389	27.76-

RYAN MOTORS INC						
Sum						27.76-
00001 SAUCIER, L B	PO#165637 11	00165637 16001000	HAY FOR PUBLIC WORKS	11/18/16	254391	275.00-

SAUCIER, L B						
Sum						275.00-
00001 SCHAUS LLC	102816	00165656 16000874	SRVS FEMA CONSULTANT	11/18/16	254392	3,150.00-

SCHAUS LLC						
Sum						3,150.00-
00001 SEMP, MICHAEL J PLLC	PRO TEMP 8/1	00165430 16000692	PRO TEMP SERVICES 8/16	11/18/16	254395	152.15-
00001 SEMP, MICHAEL J PLLC	PRO TEM SERV	00165728 16000919	PROSECUTOR PRO TEM 10/16	11/18/16	254395	377.15-

SEMP, MICHAEL J PLLC						
Sum						529.30-
00001 SHERWIN-WILLIAMS COMPANY	5508-6	00165863 16001094	EVIDENCE COLLECTION CANS	11/18/16	254396	162.86-

SHERWIN-WILLIAMS COMPANY						
Sum						162.86-
00001 SHOWS DEARMAN & WAITS IN	19364	00165643 16000871	SRVS DRINKING WTR IMPRV PLAN	11/18/16	254398	16,680.00-
00001 SHOWS DEARMAN & WAITS IN	19376	00165644 16000872	SRVS MEDICAL PARK HYDRAULICS	11/18/16	254398	3,587.50-
00001 SHOWS DEARMAN & WAITS IN	19374	00165652 16000873	SRVS 2010 ANNEXATION	11/18/16	254398	9,047.50-
00001 SHOWS DEARMAN & WAITS IN	19357	00165651 16000883	SRVS SWR HOLDING/SEPTIC TANKS	11/18/16	254398	3,825.00-

SHOWS DEARMAN & WAITS IN						
Sum						33,140.00-
00001 SIGMA CONSULTING AND TRA	REG FEES 11/	00165698 16000905	HAZ MAT TRNG 5 PUB WRKS EMP	11/18/16	254399	625.00-

SIGMA CONSULTING AND TRA						
Sum						625.00-
00001 SIGNS FIRST	H-56918	00165627 16000941	CITY EMBLEM U#20549 CONSTR	11/18/16	254400	92.44-

SIGNS FIRST

Sum							92.44-
00001	SMITH, JIM SERVICES	86371	00165503	16000718	A/C SERV CALL DISPATCH DEPT	11/18/16	254402 1,628.38-
00001	SMITH, JIM SERVICES	86630	00165503	16000719	ICE MACHINE REPAIR	11/18/16	254402 171.00-

SMITH, JIM SERVICES

Sum							1,799.38-
00001	SOLAR SUPPLY INC	3485734	00165521	16000819	A/C REPR SUPP INFO TECH DEPT	11/18/16	254404 261.56-
00001	SOLAR SUPPLY INC	3485485	00165200	16000826	A/C REPR SUPP POLICE DEPT	11/18/16	254404 620.00-
00001	SOLAR SUPPLY INC	3485290	00165002	16000949	A/C FILTERS MUN COURT	11/18/16	254404 448.59-
00001	SOLAR SUPPLY INC	3485889	00165741	16000979	A/C TOOL CONSTR DEPT	11/18/16	254404 163.16-

SOLAR SUPPLY INC

Sum							1,493.31-
00001	SOUTH MS EMERGENCY PHYSI	173006197/27	00165537	16000747	SRV 8/18/16 FORET PRISONER	11/18/16	254405 1,276.00-
00001	SOUTH MS EMERGENCY PHYSI	169542205/27	00165621	16000857	SRV 6/9/16 SHELBY PRISONER	11/18/16	254405 841.00-
00001	SOUTH MS EMERGENCY PHYSI	170988365/27	00165621	16000858	SRV 7/9/16 BARRETT PRISONER	11/18/16	254405 841.00-
00001	SOUTH MS EMERGENCY PHYSI	170980076/27	00165621	16000859	SRV 7/10/16 BARRETT PRISONER	11/18/16	254405 585.00-

SOUTH MS EMERGENCY PHYSI

Sum							3,543.00-
00001	SOUTH MS OFFICE FURNITUR	PO#163701 8/	00163701	16000986	OFFICE FURNITURE HOMELESS CRD	11/18/16	254406 760.00-

SOUTH MS OFFICE FURNITUR

Sum							760.00-
00001	SOUTHERN AUTOMATED SYSTE	AUDITOR'S RE	00165718	16000920	EXPORT DATA SPREADSHEET FORMT	11/18/16	254407 28,320.00-

SOUTHERN AUTOMATED SYSTE

Sum							28,320.00-
00001	SOUTHERN FINANCIAL SYSTE	CMCHAT2 10/1	00201796	16000946	POLICE FINES COLL.FEE	11/18/16	254408 60.80-
00001	SOUTHERN FINANCIAL SYSTE	CMCHAT3 10/1	00201797	16000947	POLICE FINES COLL.FEE	11/18/16	254408 625.91-

SOUTHERN FINANCIAL SYSTE

Sum							686.71-
00001	SOUTHERN GAS & SUPPLY OF	33117008	00165595	16001097	WELD SUPP FOR SHOP	11/18/16	254409 292.92-

SOUTHERN GAS & SUPPLY OF

Sum							292.92-
00001	SOUTHERN PINE ELECTRIC P	11/16 GENERA	00020173	16001067	MNTHLY 11/16 PUBLIC SERVICES	11/18/16	254411 1,194.12-

SOUTHERN PINE ELECTRIC P

Sum							1,194.12-
00001	SOUTHERN PINES ANIMAL SH	10/16	00165659	16000888	HANDLING/HOUSING 10/16	11/18/16	254412 9,716.00-
00001	SOUTHERN PINES ANIMAL SH	11/16	00165659	16000889	HANDLING/HOUSING 11/16	11/18/16	254412 9,716.00-
00001	SOUTHERN PINES ANIMAL SH	12/16	00165851	16001066	HANDLING/HOUSING 12/16	11/18/16	254412 9,716.00-

SOUTHERN PINES ANIMAL SH

Sum							29,148.00-
00001	SOUTHERN PIPE & SUPPLY C	192104-00	00165406	16000903	PLUMB SUPP #6 FIRE STA	11/18/16	254413 46.00-
00001	SOUTHERN PIPE & SUPPLY C	189022-00	00165413	16000904	PLUMB SUPP #6 FIRE STA	11/18/16	254413 159.00-

SOUTHERN PIPE & SUPPLY C								
Sum								205.00-
00001	SOUTHERN TIRE MART #9 (M	9015074	00165395	16000738	TIRES U#14682 JOHNSON LDC	11/18/16	254414	244.70-

SOUTHERN TIRE MART #9 (M								244.70-
Sum								244.70-
00001	SOUTHERN TIRE MART LLC	9015087	00165499	16000829	ALIGNMENT U#16655 POLICE	11/18/16	254415	59.95-
00001	SOUTHERN TIRE MART LLC	11118717	00164007	16000885	TIRES SANIT STOCK	11/18/16	254415	11,637.80-

SOUTHERN TIRE MART LLC								11,697.75-
Sum								11,697.75-
00001	SOUTHGROUP (HATTIESBURG	HATTIES-02 1	00165666	16000823	POSITION BOND MONEY HANDLERS	11/18/16	254417	175.00-
00001	SOUTHGROUP (HATTIESBURG	HATTIES-02 1	00165852	16001049	BOND RNWL CHIEF PARKER HPD	11/18/16	254417	175.00-

SOUTHGROUP (HATTIESBURG								350.00-
Sum								350.00-
00001	SPECIALTY REPAIR & REMOD	PRIV TAX RFD	00201784	16001019	PRIVILEGE TAX REFUND	11/18/16	254418	30.00-

SPECIALTY REPAIR & REMOD								30.00-
Sum								30.00-
00001	STANDARD OFFICE SUPPLY C	0065578-001	00165272	16000698	COPY PAPER/CALENDARS HUMAN RE	11/18/16	254421	541.88-
00001	STANDARD OFFICE SUPPLY C	0065830-001	00165575	16000824	OFFICE SUPP POLICE DEPT	11/18/16	254421	634.66-

STANDARD OFFICE SUPPLY C								1,176.54-
Sum								1,176.54-
00001	STATE FIRE ACADEMY	24920 LEE	00165876	16001051	REG LEE 9/19-29 PUMPER CLASS	11/18/16	254422	675.00-
00001	STATE FIRE ACADEMY	PO#164179 9/	00164179	16001093	BOOKS FIRE RECRUIT CLASS	11/18/16	254422	1,083.00-

STATE FIRE ACADEMY								1,758.00-
Sum								1,758.00-
00001	STRIBLING EQUIPMENT CO L	CS006089339:	00165577	16000977	REPR PTS U#20152 STREET	11/18/16	254425	189.34-

STRIBLING EQUIPMENT CO L								189.34-
Sum								189.34-
00001	SUNBELT FIRE INC	300864	00165197	16000730	REPR PTS U#18098	11/18/16	254427	101.36-

SUNBELT FIRE INC								101.36-
Sum								101.36-
00001	THOMPSON PLACEMAKING, PL	004	00165633	16000816	SRVS MIDTOWN CONSULT 10/16	11/18/16	254431	488.75-

THOMPSON PLACEMAKING, PL								488.75-
Sum								488.75-
00001	THYSSENKRUPP ELEVATOR CO	3002842676	00165591	16000892	MAINT 11/16 PINE ST GARAGE	11/18/16	254433	452.77-

THYSSENKRUPP ELEVATOR CO								452.77-
Sum								452.77-
00001	TIME	3274656440 2	00165937	16001072	SUBSCRIPT RNWL MAYOR DUPREE	11/18/16	254434	24.95-

TIME								24.95-
Sum								24.95-
00001	TRUCKPRO INC	039-0617039	00165217	16000767	REPR PTS U#20074/20072 SANIT	11/18/16	254436	420.36-

TRUCKPRO INC

Sum								420.36-
00001	TRUSTMARK NATIONAL BANK/	11/7/16	02017101	16001011	PUBLIC SAFETY COMP DUE 12/16	11/15/16	111354	214,324.44-

TRUSTMARK NATIONAL BANK/

Sum								214,324.44-
00001	UNITED PARCEL SERVICE IN	00008E1Y1545	00165832	16001015	SHIP CHG POLICE DEPT	11/18/16	254440	23.36-

UNITED PARCEL SERVICE IN

Sum								23.36-
00001	V F W OF THE US	PARKING SPAC	00165587	16000893	PARKING SPACES 11/16	11/18/16	254442	75.00-

V F W OF THE US

Sum								75.00-
00001	VANCLEVE, APRIL (REFUND)	DAMAGE DEP R	02017104	16001042	DAMAGE DEPOSIT REFUND	11/18/16	254443	300.00-

VANCLEVE, APRIL (REFUND)

Sum								300.00-
00001	VERIZON WIRELESS	9774622887	00165856	16001046	HPD WIRELESS SERVICE	11/18/16	254446	2,400.76-

VERIZON WIRELESS

Sum								2,400.76-
00001	VULCAN MATERIALS CO	50224658	00164824	16000751	LIMESTONE CITY WIDE USE	11/18/16	254448	3,378.24-

VULCAN MATERIALS CO

Sum								3,378.24-
00001	WAL-MART STORES INC	006587	00163538	16000898	TV'S CHIEF PARKER MAJOR LANE	11/18/16	254449	756.00-

WAL-MART STORES INC

Sum								756.00-
00001	WARING OIL CO (GULFPORT)	001525500	00165594	16001018	DIESEL EXHAUST FLUID FOR SHOP	11/18/16	254451	412.50-

WARING OIL CO (GULFPORT)

Sum								412.50-
00001	WARREN PAVING INC	23475MB	00165057	16000752	LIMESTONE CITY WIDE USE	11/18/16	254453	6,768.72-
00001	WARREN PAVING INC	812146	00163694	16000760	PAVE JERRY'S AUTO-COURTHOUSE	11/18/16	254453	13,343.23-

WARREN PAVING INC

Sum								20,111.95-
00001	WASTE MANAGEMENT OF SOUT	0009349-2526	00165442	16000770	REFUSE DISPOSAL 10/16 SANIT	11/18/16	254454	71.06-
00001	WASTE MANAGEMENT OF SOUT	0009417-2526	00165873	16001053	REFUSE DISPOSAL 10/16 SANIT	11/18/16	254454	5,941.10-

WASTE MANAGEMENT OF SOUT

Sum								6,012.16-
00001	WATERS INTERNATIONAL TRU	08P823115	00165298	16000914	TANK U#16010 CEMETERY	11/18/16	254456	47.56-
00001	WATERS INTERNATIONAL TRU	08P823119	00165298	16000915	CREDIT	11/18/16	254456	47.56

WATERS INTERNATIONAL TRU

Sum								
00001	WATTS BROTHERS TRACTOR C	01-20365	00165382	16000758	REPR PTS U#15999 STREET	11/18/16	254458	114.61-

WATTS BROTHERS TRACTOR C

[illegible]

CITY OF HATTIESBURG DOCKET OF CLAIMS PERIOD ENDING NOVEMBER 18, 2016					Date - 11/17/16		
Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
PARKS & RECREATION FUND							
00002 A & R FARM AND GARDEN	291748	00165549	16000165	SHOULDER SEEDERS GRNDS MAINT	11/18/16	254154	160.00-
A & R FARM AND GARDEN							
Sum							160.00-
00002 ALLBRITTON CHAIN SAW & L 47054		00165617	16000171	POLE SAW REPR PTS	11/18/16	254164	63.95-
ALLBRITTON CHAIN SAW & L							
Sum							63.95-
00002 ANOINTED HANDS SERVICES, 2771		00165564	16000168	SERVS 11/16 GRNDS BLDGS	11/18/16	254172	250.00-
ANOINTED HANDS SERVICES,							
Sum							250.00-
00002 BRACKMAN MOWER WAREHOUSE 21309		00165337	16000155	REPR PTS VARI MOWERS	11/18/16	254194	519.60-
00002 BRACKMAN MOWER WAREHOUSE 21398		00165340	16000156	REPRS U#18876 POLE SAW	11/18/16	254194	294.07-
00002 BRACKMAN MOWER WAREHOUSE 21531		00165556	16000167	AGRI EQUIP REPR PTS/SUPP	11/18/16	254194	254.60-
BRACKMAN MOWER WAREHOUSE							
Sum							1,068.27-
00002 BROWN, BRAXTON	SPORTS SRVS	02017106	16000188	SPORTS SUPPORT SERVICES	11/18/16	254196	32.00-
BROWN, BRAXTON							
Sum							32.00-
00002 CARQUEST AUTO PARTS STOR 14758-77771		00164787	16000147	REPR PTS U#15928 VAN	11/18/16	254203	79.14-
00002 CARQUEST AUTO PARTS STOR 14758-78331		00165115	16000148	REPR PTS U#7383 TRUCK	11/18/16	254203	75.90-
00002 CARQUEST AUTO PARTS STOR 14758-78901		00165372	16000149	REPR PTS U#9167 TRUCK	11/18/16	254203	55.18-
00002 CARQUEST AUTO PARTS STOR 14758-70984		00164787	16000163	CREDIT	11/18/16	254203	40.28
CARQUEST AUTO PARTS STOR							
Sum							169.94-
00002 CAWTHON, ANDREW C	OFFICIAL 10/	02017107	16000180	OFFICIAL-ADULT SOFTBALL	11/18/16	254206	220.00-
CAWTHON, ANDREW C							
Sum							220.00-
00002 CITY OF HATTIESBURG FUND TRF 1ST 11/1		00201752	16000170	TRF 1ST 11/16 PAYROLL	11/08/16	311168	47,854.46-
CITY OF HATTIESBURG FUND							
Sum							47,854.46-
00002 CLEMTS HARDWARE	116384	00165555	16000166	TIE DOWN STRAPS	11/18/16	254217	134.95-
CLEMTS HARDWARE							
Sum							134.95-
00002 COMSOUTH	184504	00165464	16000154	RADIO REPAIR	11/18/16	254222	104.00-
COMSOUTH							
Sum							104.00-

00002 CRY, JAMAAL	SPORTS SRVS	02017106 16000189	SPORTS SUPPORT SERVICES	11/18/16	254226	32.00-
CRY, JAMAAL						
Sum						32.00-
00002 ECONOMY SUPPLY CO	261577	00165619 16000172	REKEY LOCK CAMERON FLD ENTRY	11/18/16	254234	97.90-
ECONOMY SUPPLY CO						-----
Sum						97.90-
00002 ELKINS WHOLESALE INC	294704-00	00165375 16000137	JANIT SUPP	11/18/16	254236	670.46-
ELKINS WHOLESALE INC						-----
Sum						670.46-
00002 ESTERS, WILLARD (BUTCH)	OFFICIAL 10/	02017107 16000181	OFFICIAL-ADULT SOFTBALL	11/18/16	254241	380.00-
ESTERS, WILLARD (BUTCH)						-----
Sum						380.00-
00002 EVERETT, RAYFORD	OFFICIAL 10/	02017107 16000182	OFFICIAL-ADULT SOFTBALL	11/18/16	254242	240.00-
EVERETT, RAYFORD						-----
Sum						240.00-
00002 FAGAN TREE AND SPRAYING	2255	00165165 16000160	SPRAY TATUM/DAHMER PARKS	11/18/16	254243	3,750.00-
FAGAN TREE AND SPRAYING						-----
Sum						3,750.00-
00002 GARNER LUMLEY ELECTRIC S	530420	00165497 16000144	BREAKER CITY HALL FOUNTAIN	11/18/16	254264	47.40-
GARNER LUMLEY ELECTRIC S						-----
Sum						47.40-
00002 GLOBAL SECURITY INVESTIG	10112(A)	00164729 16000161	SECURITY YTH FOOTBALL 10/16	11/18/16	254268	760.00-
00002 GLOBAL SECURITY INVESTIG	10112(B)	00164731 16000162	SECURITY TATUM ADULT SB 10/16	11/18/16	254268	640.00-
GLOBAL SECURITY INVESTIG						-----
Sum						1,400.00-
00002 JERRY'S AUTOMOTIVE REPAI	18110	00165429 16000150	REPRS U#11213 TRUCK	11/18/16	254294	494.70-
JERRY'S AUTOMOTIVE REPAI						-----
Sum						494.70-
00002 KETTLEY, ANNETTE	SPORTS SRVS	02017106 16000190	SPORTS SUPPORT SERVICES	11/18/16	254297	120.00-
KETTLEY, ANNETTE						-----
Sum						120.00-
00002 KING, CHRISTOPHER	OFFICIAL 10/	02017107 16000183	OFFICIAL-ADULT SOFTBALL	11/18/16	254299	240.00-
KING, CHRISTOPHER						-----
Sum						240.00-
00002 LOCKHART, GREGOIRE	SPORTS SRVS	02017106 16000191	SPORTS SUPPORT SERVICES	11/18/16	254308	32.00-
LOCKHART, GREGOIRE						-----
Sum						32.00-
00002 LOWE'S OF HATTIESBURG IN	936674	00164933 16000143	APPLIANCES/SHELVES TATUM REC	11/18/16	254310	1,876.62-
LOWE'S OF HATTIESBURG IN						-----
Sum						1,876.62-

00002 MATTOX, QENTELLER L	OFFICIAL 10	02017107 16000184	OFFICIAL-ADULT SOFTBALL	11/18/16	254313	80.00-

MATTOX, QENTELLER L						80.00-
Sum						80.00-
00002 MCELHANEY PLUMBING INC	250458	00165736 16000175	PLUMB SUPP TATUM SOC RESTROOM	11/18/16	254316	99.95-

MCELHANEY PLUMBING INC						99.95-
Sum						99.95-
00002 MISSISSIPPI AG COMPANY,	W67990 (A)	00165251 16000157	REPRS U#13264 TRACTOR	11/18/16	254326	919.16-
00002 MISSISSIPPI AG COMPANY,	W67990 (C)	00165473 16000158	ADDL AMT DUE PO#165251/165252	11/18/16	254326	22.73-
00002 MISSISSIPPI AG COMPANY,	W667990 (B)	00165252 16000159	LABOR U#13264 TRACTOR	11/18/16	254326	595.00-

MISSISSIPPI AG COMPANY,						1,536.89-
Sum						1,536.89-
00002 MS GRASS NURSERY	28159	00165386 16000139	GRASS SOD TATUM PK REC OFFICE	11/18/16	254337	1,280.00-

MS GRASS NURSERY						1,280.00-
Sum						1,280.00-
00002 MS POWER COMPANY	11/16 PKS/RE	00020173 16000179	MNTHLY ELEC-PARKS & REC	11/18/16	254339	5,546.73-

MS POWER COMPANY						5,546.73-
Sum						5,546.73-
00002 NEWELL PAPER COMPANY	884153	00165374 16000138	WASP INSECTICIDE	11/18/16	254351	288.00-

NEWELL PAPER COMPANY						288.00-
Sum						288.00-
00002 PIONEER MANUFACTURING CO	INV620262	00165167 16000145	PAINT MACH PTS U#19736	11/18/16	254373	94.00-

PIONEER MANUFACTURING CO						94.00-
Sum						94.00-
00002 PLAY IT AGAIN SPORTS	PO#165441 11	00165441 16000177	ADULT SB SHIRTS MCNAIR CNTR	11/18/16	254374	2,382.00-

PLAY IT AGAIN SPORTS						2,382.00-
Sum						2,382.00-
00002 POWELL, RANDY	SPORTS SRVS	02017106 16000192	SPORTS SUPPORT SERVICES	11/18/16	254376	228.00-

POWELL, RANDY						228.00-
Sum						228.00-
00002 SHERWIN-WILLIAMS COMPANY	5077-2	00165515 16000146	BALLFIELD MARKING PAINT	11/18/16	254396	154.80-
00002 SHERWIN-WILLIAMS COMPANY	5912-8	00163860 16000178	PAINT TOWN SQ PK TREES/DECOR	11/18/16	254396	50.64-

SHERWIN-WILLIAMS COMPANY						205.44-
Sum						205.44-
00002 SMITH, CARLTON L	OFFICIAL 10/	02017107 16000185	OFFICIAL-ADULT SOFTBALL	11/18/16	254401	360.00-

SMITH, CARLTON L						360.00-
Sum						360.00-
00002 SOUTHERN MS PINE STRAW	10541	00165477 16000140	PINE STRAW CITY WIDE USE	11/18/16	254410	550.00-

SOUTHERN MS PINE STRAW						550.00-
Sum						550.00-
00002 SOUTHERN TIRE MART #9 (M	9015272	00165431 16000151	TIRES U#13130 TRUCK	11/18/16	254414	267.60-

00002 SOUTHERN TIRE MART #9 (M 9015144	00165439 16000152 TIRES U#18858 TRUCK	11/18/16	254414	440.75-
00002 SOUTHERN TIRE MART #9 (M 9015297	00165616 16000176 RPLCMNT TIRE TRAILER	11/18/16	254414	69.37-

SOUTHERN TIRE MART #9 (M				
Sum				777.72-
00002 SPEEDY PRINTING & SIGNS 23110	00165605 16000173 REC MAINT OFFICE SIGN	11/18/16	254419	285.00-

SPEEDY PRINTING & SIGNS				
Sum				285.00-
00002 SPORTS ILLUSTRATED PLAY STMT #1 2665	00165569 16000169 YTH BASKETBALL REGISTRATIONS	11/18/16	254420	309.00-

SPORTS ILLUSTRATED PLAY				
Sum				309.00-
00002 TERRELL, WINSTON	OFFICIAL 10/ 02017107 16000186 OFFICIAL-ADULT SOFTBALL	11/18/16	254429	385.00-

TERRELL, WINSTON				
Sum				385.00-
00002 UNIVERSITY TIRE & SERVIC 498514	00165506 16000153 TIRES U#11214 TRUCK	11/18/16	254441	240.00-

UNIVERSITY TIRE & SERVIC				
Sum				240.00-
00002 VARNADO, ALEXANDRIA	SPORTS SRVS 02017106 16000193 SPORTS SUPPORT SERVICES	11/18/16	254444	136.00-

VARNADO, ALEXANDRIA				
Sum				136.00-
00002 VARNADO, UNDREA	SPORTS SRVS 02017106 16000194 SPORTS SUPPORT SERVICES	11/18/16	254445	232.00-

VARNADO, UNDREA				
Sum				232.00-
00002 VESELY'S NURSERY	PO#165326 10 00165326 16000141 PANSY PLANTS VETERANS PARK	11/18/16	254447	288.00-
00002 VESELY'S NURSERY	PO#165474 11 00165474 16000142 GRASS SOD 307 S 22ND AVE	11/18/16	254447	175.00-

VESELY'S NURSERY				
Sum				463.00-
00002 WATER FLOW PRODUCTIONS I 9933	00165532 16000174 IRRIGATION REPR TOWN/VET PKS	11/18/16	254455	1,943.59-

WATER FLOW PRODUCTIONS I				
Sum				1,943.59-
00002 WILLIAMS. CHRISTY M	OFFICIAL 10/ 02017107 16000187 OFFICIAL-ADULT SOFTBALL	11/18/16	254462	160.00-

WILLIAMS. CHRISTY M				
Sum				160.00-
00002 WILLMUT GAS & OIL COMPAN 11/16 PKS/RE 00020173	16000195 MNTHLY GAS-PARKS & REC	11/18/16	254463	51.65-

WILLMUT GAS & OIL COMPAN				
Sum				51.65-

Sum				77,072.62-

Date - 11/17/16

Check
Amount

6,669.84-

6,669.84-

6,669.84-

CITY OF HATTIESBURG

DOCKET OF CLAIMS

PERIOD ENDING NOVEMBER 18, 2016

Date - 11/17/16

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
WATER & SEWER OPERATION/MAINT.							
00009 ADVANCED JANITORIAL SERV	101012	WTR B	00165444	16000129 SERVS 10/16 WTR BILLING OFFC	11/18/16	254159	495.00-
ADVANCED JANITORIAL SERV							
Sum							495.00-
00009 AFFORDABLE AUTO CARE	PO#165388	10	00165388	16000171 REPRS U#13081/14760 LAGOONS	11/18/16	254160	449.00-
AFFORDABLE AUTO CARE							
Sum							449.00-
00009 AGRI-AFC LLC	5288513		00165437	16000140 WEED KILLER FOR LIFT STATIONS	11/18/16	254162	886.00-
AGRI-AFC LLC							
Sum							886.00-
00009 APGN INC	5898		00164663	16000142 REPR BLOWER UNIT NORTH LAGOON	11/18/16	254173	30,375.00-
00009 APGN INC	5723		00164027	16000225 RPLCMNT AIR FILTER SETS LAGN	11/18/16	254173	3,405.00-
APGN INC							
Sum							33,780.00-
00009 AUTO ARMATURE SERVICE IN	06370		00159989	16000158 BATTERY U#13513 SEWER	11/18/16	254181	116.95-
00009 AUTO ARMATURE SERVICE IN	07538		00165694	16000184 BATTERY U#14760 LAGOON	11/18/16	254181	138.95-
00009 AUTO ARMATURE SERVICE IN	06499		00164201	16000218 BATTERY U#19356 WTR BILLING	11/18/16	254181	112.95-
00009 AUTO ARMATURE SERVICE IN	06159		00163653	16000219 BATTERY U#12486 TRANS	11/18/16	254181	174.95-
00009 AUTO ARMATURE SERVICE IN	05847		00162821	16000223 STARTER U#15916 SEWER	11/18/16	254181	489.95-
00009 AUTO ARMATURE SERVICE IN	07502		00165628	16000224 BATTERIES U#13061/14142 SEWER	11/18/16	254181	251.90-
AUTO ARMATURE SERVICE IN							
Sum							1,285.65-
00009 BATTERIES PLUS BULBS #63	634-112273		00165490	16000132 VARI SIZE BATTERIES PLT #2	11/18/16	254186	149.04-
BATTERIES PLUS BULBS #63							
Sum							149.04-
00009 BEST BUY BUSINESS ADVANT	2406503		00164331	16000163 IPAD PRO'S LAGOONS	11/18/16	254188	1,923.94-
BEST BUY BUSINESS ADVANT							
Sum							1,923.94-
00009 BLOSSMAN GAS INC	PO#165640	11	00165640	16000169 PROPANE WTR PLT FORKLIFT	11/18/16	254190	72.00-
BLOSSMAN GAS INC							
Sum							72.00-
00009 BRACKMAN MOWER WAREHOUSE	19790		00164446	16000220 TIRE REPR WTR PLANT	11/18/16	254194	128.53-
BRACKMAN MOWER WAREHOUSE							
Sum							128.53-
00009 CARQUEST AUTO PARTS STOR	14758-76295		00164341	16000197 REPR PTS U#18705 WTR BILLING	11/18/16	254203	116.33-
CARQUEST AUTO PARTS STOR							

Sum								116.33-
00009 CASABLANCA CONSTRUCTION	APPL #2	00165898	16000221	SRV WAREHOUSE PLT #2	11/18/16	254204		3,668.90-
00009 CASABLANCA CONSTRUCTION	APPL #3	00165898	16000222	SERV WAREHOUSE PLT #2 10/16	11/18/16	254204		34,556.25-

CASABLANCA CONSTRUCTION								
Sum								38,225.15-
00009 CENTRAL PIPE SUPPLY INC	S100076943.0	00165327	16000130	SHUTOFF TOOLS TRANS DEPT	11/18/16	254207		283.16-
00009 CENTRAL PIPE SUPPLY INC	S100075918.0	00165145	16000185	PLUMB SUPP TRANS DEPT	11/18/16	254207		1,700.00-
00009 CENTRAL PIPE SUPPLY INC	S100077047.0	00165455	16000186	PLUMB SUPP TRANS DEPT	11/18/16	254207		3,437.45-
00009 CENTRAL PIPE SUPPLY INC	S100077047.0	00165455	16000187	PLUMB SUPP TRANS DEPT	11/18/16	254207		483.73-
00009 CENTRAL PIPE SUPPLY INC	S100076061.0	00165237	16000202	PLUMB SUPP TRANS STOCK	11/18/16	254207		3,682.18-
00009 CENTRAL PIPE SUPPLY INC	S100076061.0	00165237	16000203	PLUMB SUPP TRANS STOCK	11/18/16	254207		117.18-
00009 CENTRAL PIPE SUPPLY INC	S100076061.0	00165237	16000204	PLUMB SUPP TRANS STOCK	11/18/16	254207		1,196.00-

CENTRAL PIPE SUPPLY INC								
Sum								10,899.70-
00009 CERTIFIED LABORATORIES	2510363	00165527	16000195	CHEMICALS LAGOONS	11/18/16	254208		18,464.00-
00009 CERTIFIED LABORATORIES	2516113	00165693	16000200	CHEMICALS SEWER DEPT	11/18/16	254208		16,670.50-

CERTIFIED LABORATORIES								
Sum								35,134.50-
00009 CITY OF HATTIESBURG FUND TRF 1ST 11/1	00201752	16000164	TRF 1ST 11/16	PAYROLL	11/08/16	21983		88,536.73-

CITY OF HATTIESBURG FUND								
Sum								88,536.73-
00009 COBURN'S SUPPLY CO INC	609449315	00165147	16000191	PLUMB SUPP WAREHOUSE STOCK	11/18/16	254218		1,009.08-
00009 COBURN'S SUPPLY CO INC	609449315-1	00165147	16000192	PLUMB SUPP WAREHOUSE STOCK	11/18/16	254218		4,530.60-
00009 COBURN'S SUPPLY CO INC	609500382	00165599	16000201	MARKING PAINT/COUPLINGS TRANS	11/18/16	254218		983.04-

COBURN'S SUPPLY CO INC								
Sum								6,522.72-
00009 COVINGTON SALES & SERVIC 74070		00165070	16000193	REPRS U#18897 SEWER	11/18/16	254225		202.82-

COVINGTON SALES & SERVIC								
Sum								202.82-
00009 D P C ENTERPRISES LP	212002278-16	00165191	16000205	CHEMICALS FORREST GENERAL	11/18/16	254227		1,655.91-
00009 D P C ENTERPRISES LP	212002279-16	00165191	16000206	CHEMICALS USM TANK	11/18/16	254227		459.98-
00009 D P C ENTERPRISES LP	212002280-16	00165191	16000207	CHEMICALS 4TH ST WELL	11/18/16	254227		367.98-
00009 D P C ENTERPRISES LP	212002281-16	00165191	16000208	CHEMICALS WESLEY TANK	11/18/16	254227		1,195.94-

D P C ENTERPRISES LP								
Sum								3,679.81-
00009 ELKINS WHOLESALE INC	295468-00	00165561	16000156	NITRILE GLOVES WTR PLANTS	11/18/16	254236		408.60-

ELKINS WHOLESALE INC								
Sum								408.60-
00009 EQUIPMENT INC	165501201	00163537	16000131	REPRS U#14238 TRANS	11/18/16	254240		10,375.75-

EQUIPMENT INC								
Sum								10,375.75-
00009 FORTERRA PIPE & PRECAST, 11470571		00165384	16000138	MANHOLE BASE 53 ACADEMY DR	11/18/16	254253		335.00-

FORTERRA PIPE & PRECAST,

Sum							335.00-
00009 G & K SERVICES	1035776990	00165559	16000143	UNIFORMS 10/31 TRANS	11/18/16	254263	79.21-
00009 G & K SERVICES	1035776994	00165559	16000144	MOP/MAT 10/31 PLANT	11/18/16	254263	14.40-
00009 G & K SERVICES	1035776993	00165559	16000145	UNIFORMS 10/31 PLANT	11/18/16	254263	54.41-
00009 G & K SERVICES	1035776991	00165559	16000146	UNIFORMS 10/31 SEWER	11/18/16	254263	50.70-
00009 G & K SERVICES	1035776992	00165559	16000147	UNIFORMS 10/31 LAGOON	11/18/16	254263	74.52-
00009 G & K SERVICES	1035765927	00165734	16000172	UNIFORMS 9/26 WTR BILLING	11/18/16	254263	23.40-
00009 G & K SERVICES	1035768154	00165734	16000173	UNIFORMS 10/13 WTR BILLING	11/18/16	254263	23.40-
00009 G & K SERVICES	103577040	00165734	16000174	UNIFORMS 10/10 WTR BILLING	11/18/16	254263	23.40-
00009 G & K SERVICES	1035772614	00165734	16000175	UNIFORMS 10/17 WTR BILLING	11/18/16	254263	23.40-
00009 G & K SERVICES	1035774828	00165734	16000176	UNIFORMS 10/24 WTR BILLING	11/18/16	254263	23.40-
00009 G & K SERVICES	1035777023	00165734	16000177	UNIFORMS 10/31 WTR BILLING	11/18/16	254263	23.40-
00009 G & K SERVICES	1035779199	00165723	16000178	UNIFORMS 11/07 TRANS	11/18/16	254263	59.21-
00009 G & K SERVICES	1035779203	00165723	16000179	MOP/MAT 11/07 PLANT	11/18/16	254263	14.40-
00009 G & K SERVICES	1035779202	00165723	16000180	UNIFORMS 11/07 PLANT	11/18/16	254263	54.41-
00009 G & K SERVICES	1035779200	00165723	16000181	UNIFORMS 11/07 SEWER	11/18/16	254263	50.70-
00009 G & K SERVICES	1035779201	00165723	16000182	UNIFORMS 11/07 LAGOON	11/18/16	254263	59.90-
00009 G & K SERVICES	1035781389	00165857	16000211	UNIFORMS 11/14 TRANS	11/18/16	254263	59.21-
00009 G & K SERVICES	103578193	00165857	16000212	MOP/MAT 11/14 PLANT	11/18/16	254263	14.40-
00009 G & K SERVICES	1035781392	00165857	16000213	UNIFORMS 11/14 PLANT	11/18/16	254263	54.41-
00009 G & K SERVICES	1035781390	00165857	16000214	UNIFORMS 11/14 SEWER	11/18/16	254263	54.60-
00009 G & K SERVICES	1035781391	00165857	16000215	UNIFORMS 11/14 LAGOON	11/18/16	254263	17.90-

G & K SERVICES

Sum							852.78-
00009 GARNER LUMLEY ELECTRIC S	530474	00165517	16000162	REPRS LINCOLN RD #2 LIFT STA	11/18/16	254264	543.57-

GARNER LUMLEY ELECTRIC S

Sum							543.57-
00009 GRINER DRILLING SERVICE	R40580	00163816	16000190	REPLACE MOTOR PUMP #1 PLT #2	11/18/16	254270	8,800.00-

GRINER DRILLING SERVICE

Sum							8,800.00-
00009 IRBY, STUART C CO	S009871294.0	00165312	16000136	ELEC SUPP PLT #1 MIXER	11/18/16	254291	337.00-
00009 IRBY, STUART C CO	S009871294.0	00165312	16000137	ELEC SUPP PLT #1 MIXER	11/18/16	254291	64.75-

IRBY, STUART C CO

Sum							401.75-
00009 L & A CONTRACTING CO	483-068	00165789	16000199	AERATOR MNT 10/24-11/4 LAGNS	11/18/16	254302	45,444.31-

L & A CONTRACTING CO

Sum							45,444.31-
00009 MS POWER COMPANY	16316-48024	00165598	16000157	ELEC REPR 2700 LAKEVW PLT#1	11/18/16	254339	1,527.20-
00009 MS POWER COMPANY	11/16 W&SO&M	00020173	16000210	MNTHLY ELEC-W&SO&M	11/18/16	254339	67,919.66-

MS POWER COMPANY

Sum							69,446.86-
00009 MS 811	170172	00165896	16000226	SERV 11/15-10/16 LAGOON	11/18/16	254340	12,817.84-

MS 811								
Sum								12,817.84-
00009	NEWELL PAPER COMPANY	884826	00165550	16000188	JANIT SUPP WTR PLANTS	11/18/16	254351	422.88-

NEWELL PAPER COMPANY								
Sum								422.88-
00009	OVERHEAD DOOR CO OF HBUR	77648	00164585	16000189	ADJUST SERVICE DOOR PLT #2	11/18/16	254356	468.90-

OVERHEAD DOOR CO OF HBUR								
Sum								468.90-
00009	PEARL RIVER VALLEY EPA (	11/16 W&SO&M	00020176	16000209	MNTHLY 11/16 PUBLIC SERVICES	11/18/16	254361	7,755.42-

PEARL RIVER VALLEY EPA (								
Sum								7,755.42-
00009	RICOH CORP	5045224894 W	00165618	16000149	PRODUCTION PRINTER CHARGES	11/18/16	254380	147.67-

RICOH CORP								
Sum								147.67-
00009	RJM MCQUEEN CONTRACTING	1165	00165593	16000159	SEWER REPR LINCOLN RD/PARKWAY	11/18/16	254382	27,951.30-
00009	RJM MCQUEEN CONTRACTING	1166	00165593	16000160	SEWER REPR E 6TH/NEW ORLEANS	11/18/16	254382	10,875.95-
00009	RJM MCQUEEN CONTRACTING	1167	00165674	16000170	10/16 PUMPING	11/18/16	254382	19,214.70-

RJM MCQUEEN CONTRACTING								
Sum								58,041.95-
00009	RYAN MOTORS INC	251918	00165172	16000139	REPRS U#18412 SEWER	11/18/16	254389	786.74-

RYAN MOTORS INC								
Sum								786.74-
00009	SCOGGINS PUMP REPAIR	10414	00165303	16000141	PUMP #3 REPR YEAST PLANT STA	11/18/16	254393	9,663.00-
00009	SCOGGINS PUMP REPAIR	10343	00164551	16000196	PUMP REPR TURTLE CRK LIFT STA	11/18/16	254393	450.00-

SCOGGINS PUMP REPAIR								
Sum								10,113.00-
00009	SECURITY BLANKET	83923	00165509	16000134	SECURITY CAMERA PLT #2	11/18/16	254394	1,124.00-
00009	SECURITY BLANKET	83922	00165511	16000135	SECURITY CAMERA PLT #2	11/18/16	254394	497.25-

SECURITY BLANKET								
Sum								1,621.25-
00009	SOUTHERN PINE ELECTRIC P	11/16 W&SO&M	00020173	16000216	MNTHLY 11/16 PUBLIC SERVICES	11/18/16	254411	768.51-

SOUTHERN PINE ELECTRIC P								
Sum								768.51-
00009	SOUTHERN TIRE MART #9 (M	9013208	00163834	16000161	TIRES U#19778 SEWER	11/18/16	254414	659.27-

SOUTHERN TIRE MART #9 (M								
Sum								659.27-
00009	SOUTHERN WATERWORKS SUPP	67332	00165136	16000183	CHLORINATOR WTR PLANT	11/18/16	254416	2,610.90-

SOUTHERN WATERWORKS SUPP								
Sum								2,610.90-
00009	SPEEDY PRINTING & SIGNS	23078	00165399	16000198	NSF DOOR HANGERS WTR BILLING	11/18/16	254419	365.00-

365.00-

67.56-

67.56-

11/18/16	254453	982.31-
11/18/16	254453	880.22-
11/18/16	254453	1,886.18-
11/18/16	254453	4,245.47-
11/18/16	254453	2,709.17-
11/18/16	254453	1,733.67-
11/18/16	254453	262.70-
11/18/16	254453	3,600.58-
11/18/16	254453	5,782.44-
11/18/16	254453	2,632.56-

24,715.30-

11/18/16	254456	2,367.07-
----------	--------	-----------

2,367.07-

11/18/16 254463 64.30-

64.30-

482,889.10-

CITY OF HATTIESBURG

DOCKET OF CLAIMS

PERIOD ENDING NOVEMBER 18, 2016

Date - 11/17/16

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
WATER & SEWER FUND							
00011 ACOSTA, PAMELA S	METER DEP RF	02017102	16000124	METER DEP RFD	11/18/16	254156	75.00-
ACOSTA, PAMELA S							
Sum							75.00-
00011 ANDERSON, HOWARD	METER DEP RF	00201776	16000081	METER DEP RFD	11/18/16	254169	42.00-
ANDERSON, HOWARD							
Sum							42.00-
00011 ANDERSON, WILLA	METER DEP RF	02017102	16000118	METER DEP RFD	11/18/16	254170	1.32-
ANDERSON, WILLA							
Sum							1.32-
00011 ANDREWS, ANDRE ANTONIO	METER DEP RF	02017102	16000131	METER DEP RFD	11/18/16	254171	26.00-
ANDREWS, ANDRE ANTONIO							
Sum							26.00-
00011 AUSTIN, LUISA	METER DEP RF	02017102	16000119	METER DEP RFD	11/18/16	254179	23.00-
AUSTIN, LUISA							
Sum							23.00-
00011 BAILEY, KENNETH	METER DEP RF	02017102	16000107	METER DEP RFD	11/18/16	254184	31.32-
BAILEY, KENNETH							
Sum							31.32-
00011 BARRETT, ADDIE D	METER DEP RF	00201776	16000088	METER DEP RFD	11/18/16	254185	75.00-
BARRETT, ADDIE D							
Sum							75.00-
00011 BOWELL, TERRI	METER DEP RF	02017102	16000135	METER DEP RFD	11/18/16	254193	26.00-
BOWELL, TERRI							
Sum							26.00-
00011 CAMPBELL, ALLISON	METER DEP RF	02017102	16000105	METER DEP RFD	11/18/16	254201	23.00-
CAMPBELL, ALLISON							
Sum							23.00-
00011 CITY OF HATTIESBURG FUND 10/16 WATER	00201778	16000078	10/16 WATER DIST 11/16	11/03/16	311167	827,825.41-	
CITY OF HATTIESBURG FUND							
Sum							827,825.41-
00011 CLARDY, CHRISTOPHER J	METER DEP RF	02017102	16000103	METER DEP RFD	11/18/16	254213	75.00-
CLARDY, CHRISTOPHER J							
Sum							75.00-
00011 CLARK, MARY P	METER DEP RF	02017102	16000128	METER DEP RFD	11/18/16	254214	17.80-

Sum									17.80-
00011 COLTATE CAPITAL, LLC	METER DEP RF	02017102	16000121	METER DEP RFD		11/18/16	254219	26.00-	

COLTATE CAPITAL, LLC								26.00-	
Sum								47.39-	
00011 DEAR MRS ADKINS LLC	METER DEP RF	02017102	16000132	METER DEP RFD		11/18/16	254230	47.39-	

DEAR MRS ADKINS LLC								47.39-	
Sum								31.32-	
00011 DUCKSWORTH, JOSHUA	METER DEP RF	02017102	16000120	METER DEP RFD		11/18/16	254233	31.32-	

DUCKSWORTH, JOSHUA								31.32-	
Sum								40.00-	
00011 FAUST, JOHN M	METER DEP RF	02017102	16000092	METER DEP RFD		11/18/16	254246	40.00-	

FAUST, JOHN M								40.00-	
Sum								26.00-	
00011 FERGUSON, JUSTIN C	METER DEP RF	02017102	16000101	METER DEP RFD		11/18/16	254248	26.00-	

FERGUSON, JUSTIN C								26.00-	
Sum								75.00-	
00011 FINK JUDITH *	METER DEP RF	02017102	16000136	METER DEP RFD		11/18/16	254249	75.00-	

FINK JUDITH *								75.00-	
Sum								31.32-	
00011 GUTTERMAN, KELLIE	METER DEP RF	02017102	16000114	METER DEP RFD		11/18/16	254272	31.32-	

GUTTERMAN, KELLIE								31.32-	
Sum								40.00-	
00011 HAYDEL, JEFF	METER DEP RF	02017102	16000094	METER DEP RFD		11/18/16	254281	40.00-	

HAYDEL, JEFF								40.00-	
Sum								75.00-	
00011 HENRIE, SAMANTHA T	METER DEP RF	02017102	16000115	METER DEP RFD		11/18/16	254282	75.00-	

HENRIE, SAMANTHA T								75.00-	
Sum								75.00-	
00011 HEWITT, RUSSELL T	METER DEP RF	02017102	16000113	METER DEP RFD		11/18/16	254283	75.00-	

HEWITT, RUSSELL T								75.00-	
Sum								26.00-	
00011 HUGHES, AMBER M	METER DEP RF	02017102	16000098	METER DEP RFD		11/18/16	254285	26.00-	

HUGHES, AMBER M								26.00-	
Sum								40.00-	
00011 INGRAM, ADAM S	METER DEP RF	02017102	16000096	METER DEP RFD		11/18/16	254287	40.00-	

INGRAM, ADAM S								40.00-	
Sum								40.00-	

00011 JONES, CHRISTOPHER A	WTR OVRPMT R 00201773 16000079 WTR OVRPMT RFD	11/18/16	254295	61.32-
JONES, CHRISTOPHER A				-----
Sum				61.32-
00011 KENNEDY, LAUREN A	METER DEP RF 00201776 16000087 METER DEP RFD	11/18/16	254296	26.00-
KENNEDY, LAUREN A				-----
Sum				26.00-
00011 KIDD, MEGAN	METER DEP RF 02017102 16000109 METER DEP RFD	11/18/16	254298	75.00-
KIDD, MEGAN				-----
Sum				75.00-
00011 LONDON AND STETELMAN2	METER DEP RF 02017102 16000111 METER DEP RFD	11/18/16	254309	75.00-
LONDON AND STETELMAN2				-----
Sum				75.00-
00011 LOWRY, DESIREE	METER DEP RF 02017102 16000110 METER DEP RFD	11/18/16	254311	17.80-
LOWRY, DESIREE				-----
Sum				17.80-
00011 MCLENDON, MARTHA	METER DEP RF 00201776 16000082 METER DEP RFD	11/18/16	254317	43.00-
MCLENDON, MARTHA				-----
Sum				43.00-
00011 MCNALLY, OWEN	METER DEP RF 02017102 16000116 METER DEP RFD	11/18/16	254319	16.32-
MCNALLY, OWEN				-----
Sum				16.32-
00011 MICHAEL, BRIAN S	METER DEP RF 02017102 16000122 METER DEP RFD	11/18/16	254322	31.32-
MICHAEL, BRIAN S				-----
Sum				31.32-
00011 NATIONAL TAX CENTERS	METER DEP RF 02017102 16000102 METER DEP RFD	11/18/16	254343	41.88-
NATIONAL TAX CENTERS				-----
Sum				41.88-
00011 NAUSE, HARRY JR 2	METER DEP RF 02017102 16000097 METER DEP RFD	11/18/16	254347	41.88-
NAUSE, HARRY JR 2				-----
Sum				41.88-
00011 NETTERVILLE, BILLY	METER DEP RF 02017102 16000106 METER DEP RFD	11/18/16	254350	25.84-
NETTERVILLE, BILLY				-----
Sum				25.84-
00011 NUTT, ELIZABETH	METER DEP RF 02017102 16000099 METER DEP RFD	11/18/16	254352	26.00-
NUTT, ELIZABETH				-----
Sum				26.00-
00011 OAK GROVE PLAZA PKG STOR	METER DEP RF 02017102 16000090 METER DEP RFD	11/18/16	254353	6.88-
OAK GROVE PLAZA PKG STOR				-----

Sum						6.88-
00011 PELTS, MICHAEL D	METER DEP RF 02017102 16000127	METER DEP RFD	11/18/16	254362		16.32-

PELTS, MICHAEL D						
Sum						16.32-
00011 PETERSEN, THOMAS	METER DEP RF 00201776 16000086	METER DEP RFD	11/18/16	254365		75.00-

PETERSEN, THOMAS						
Sum						75.00-
00011 PETERSON, CHARLES	METER DEP RF 02017102 16000093	METER DEP RFD	11/18/16	254366		40.00-

PETERSON, CHARLES						
Sum						40.00-
00011 PIERCE, STEPHEN A	METER DEP RF 02017102 16000091	METER DEP RFD	11/18/16	254367		40.00-

PIERCE, STEPHEN A						
Sum						40.00-
00011 ROBINSON, GERALD L	METER DEP RF 02017102 16000089	METER DEP RFD	11/18/16	254383		10.00-

ROBINSON, GERALD L						
Sum						10.00-
00011 ROLLINS, JOHNNIE PEARL	METER DEP RF 02017102 16000117	METER DEP RFD	11/18/16	254384		26.00-

ROLLINS, JOHNNIE PEARL						
Sum						26.00-
00011 RUSSELL, CAROL	WTR OVRPMT R 00201775 16000080	WTR OVRPMT RFD	11/18/16	254388		214.54-
00011 RUSSELL, CAROL	METER DEP RF 00201776 16000084	METER DEP RFD	11/18/16	254388		75.00-

RUSSELL, CAROL						
Sum						289.54-
00011 SARTAIN, ALCE	METER DEP RF 02017102 16000130	METER DEP RFD	11/18/16	254390		31.32-

SARTAIN, ALCE						
Sum						31.32-
00011 SNODGRASS, STANLEY	METER DEP RF 02017102 16000104	METER DEP RFD	11/18/16	254403		75.00-
SNODGRASS, STANLEY						
Sum						75.00-
00011 STEPHENS, RONALD H	METER DEP RF 02017102 16000112	METER DEP RFD	11/18/16	254423		25.84-

STEPHENS, RONALD H						
Sum						25.84-
00011 STOKLEY, PATRICK E	METER DEP RF 02017102 16000133	METER DEP RFD	11/18/16	254424		31.32-

STOKLEY, PATRICK E						
Sum						31.32-
00011 STUDIO 22	METER DEP RF 02017102 16000100	METER DEP RFD	11/18/16	254426		41.88-

STUDIO 22						
Sum						41.88-
00011 SUNDBERG, ELLEN	METER DEP RF 02017102 16000095	METER DEP RFD	11/18/16	254428		6.88-

Sum								6.88-
00011 THE ARBOR LLC E	METER DEP RF 02017102 16000134	METER DEP RFD		11/18/16	254430		41.88-	

THE ARBOR LLC E							41.88-	
Sum							31.32-	
00011 THORTON, KAITLYN	METER DEP RF 02017102 16000126	METER DEP RFD		11/18/16	254432		31.32-	

THORTON, KAITLYN							31.32-	
Sum							74.96-	
00011 TURNER, STACEY	METER DEP RF 02017102 16000123	METER DEP RFD		11/18/16	254437		74.96-	

TURNER, STACEY							74.96-	
Sum							26.00-	
00011 UNDERWOOD, HEATHER	METER DEP RF 02017102 16000108	METER DEP RFD		11/18/16	254439		26.00-	

UNDERWOOD, HEATHER							26.00-	
Sum							26.00-	
00011 WATSON, PERCY 507	METER DEP RF 00201776 16000083	METER DEP RFD		11/18/16	254457		26.00-	

WATSON, PERCY 507							26.00-	
Sum							1.72-	
00011 WHEAT, BRENNEN	METER DEP RF 02017102 16000125	METER DEP RFD		11/18/16	254459		1.72-	

WHEAT, BRENNEN							1.72-	
Sum							35.24-	
00011 WHYTE, EDWARD	METER DEP RF 00201776 16000085	METER DEP RFD		11/18/16	254461		35.24-	

WHYTE, EDWARD							35.24-	
Sum							75.00-	
00011 YEAGER, REBECCA	METER DEP RF 02017102 16000129	METER DEP RFD		11/18/16	254465		75.00-	

YEAGER, REBECCA							75.00-	
Sum							830,283.34-	

Sum								

Date - 11/17/16

Vendor

Invoice
Number

Purchase Order

Claims
Number

Item	Description
------	-------------

Check
Date

Check
No.

Check
Amount

POLICE FORFEITURES FUND

00019 MOORE'S BICYCLE SHOP INC PO#161650 6/ 00161650 16000004 BIKES FOR TRAFFIC DIV

11/18/16

254329

4,793.88-

MOORE'S BICYCLE SHOP INC

Sum

4,793.88-

Sum

4,793.88-

- 11/17/16

Check
Amount

9,750.00-

9,750.00-

9,750.00-

Date - 11/17/16

Check
Amount

75,000.00-

75,000.00-

20,000.00-

20,000.00-

5,971.89-

5,971.89-

100,971.89-

Date - 11/17/16

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
MASS TRANSIT FUND							
00073 ADVANCED JANITORIAL SERV	101012 MASS	00165444	16000046	SERVS 10/16 MASS TRANSIT	11/18/16	254159	345.00-
ADVANCED JANITORIAL SERV							
Sum							345.00-
00073 CITY OF HATTIESBURG FUND	TRF 1ST 11/1	00201752	16000054	TRF 1ST 11/16 PAYROLL	11/08/16	111348	23,122.76-
CITY OF HATTIESBURG FUND							
Sum							23,122.76-
00073 G & K SERVICES	1035768126	00165811	16000057	UNIFORMS 10/03 MECHANICS	11/18/16	254263	7.80-
00073 G & K SERVICES	1035770378	00165811	16000058	UNIFORMS 10/10 MECHANICS	11/18/16	254263	7.80-
00073 G & K SERVICES	1035772586	00165811	16000059	UNIFORMS 10/17 MECHANICS	11/18/16	254263	7.80-
00073 G & K SERVICES	1035774798	00165811	16000060	UNIFORMS 10/24 MECHANICS	11/18/16	254263	7.80-
00073 G & K SERVICES	1035776995	00165811	16000061	UNIFORMS 10/31 MECHANICS	11/18/16	254263	7.80-
00073 G & K SERVICES	1035768128	00165813	16000062	UNIFORMS 10/03 DRIVERS	11/18/16	254263	42.90-
00073 G & K SERVICES	1035770380	00165813	16000063	UNIFORMS 10/10 DRIVERS	11/18/16	254263	42.90-
00073 G & K SERVICES	1035772588	00165813	16000064	UNIFORMS 10/17 DRIVERS	11/18/16	254263	42.90-
00073 G & K SERVICES	1035774800	00165813	16000065	UNIFORMS 10/24 DRIVERS	11/18/16	254263	42.90-
00073 G & K SERVICES	10357576997	00165813	16000066	UNIFORMS 10/31 DRIVERS	11/18/16	254263	42.90-
00073 G & K SERVICES	1035768127	00165812	16000067	MATS 10/03	11/18/16	254263	5.10-
00073 G & K SERVICES	1035770379	00165812	16000068	MATS 10/10	11/18/16	254263	5.10-
00073 G & K SERVICES	1035772587	00165812	16000069	MATS 10/17	11/18/16	254263	5.10-
00073 G & K SERVICES	1035774799	00165812	16000070	MATS 10/24	11/18/16	254263	5.10-
00073 G & K SERVICES	1035776996	00165812	16000071	MATS 10/31	11/18/16	254263	5.10-
G & K SERVICES							
Sum							279.00-
00073 GILLIG LLC	40275314	00165322	16000052	REPR PTS U#16234 BUS	11/18/16	254266	323.04-
GILLIG LLC							
Sum							323.04-
00073 HANSON, LISA M	TRAV ADVANCE	00165528	16000048	TRAV ADV FTA WRKSHOP ATLANTA	11/18/16	254279	725.18-
HANSON, LISA M							
Sum							725.18-
00073 JERRY'S AUTOMOTIVE REPAI	18117	00165668	16000055	REPRS U#16761 BUS	11/18/16	254294	243.20-
JERRY'S AUTOMOTIVE REPAI							
Sum							243.20-
00073 SOUTHERN TIRE MART LLC	11120813	00165209	16000056	TIRES FOR BUSES	11/18/16	254415	2,874.74-
SOUTHERN TIRE MART LLC							
Sum							2,874.74-
00073 WARING OIL CO (GULFPORT)	001520279	00165074	16000047	DEF PUMP OFF FOR BUSES	11/18/16	254451	250.00-
WARING OIL CO (GULFPORT)							

[illegible]

CITY OF HATTIESBURG

DOCKET OF CLAIMS

Date - 11/17/16

PERIOD ENDING NOVEMBER 18, 2016

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount

WATER&SEWER CONSTRUCTION FUND							
00075 SHOWS DEARMAN & WAITS IN 19356		00165629	16000012	SRV WAREHOUSE PLANT #2	11/18/16	254398	3,052.50-
00075 SHOWS DEARMAN & WAITS IN 19366		00165647	16000013	SRV SEWER MANAGEMENT PHASE I	11/18/16	254398	13,330.50-
00075 SHOWS DEARMAN & WAITS IN 19375		00165648	16000014	SRV WATER MAP UPDATES	11/18/16	254398	525.00-
00075 SHOWS DEARMAN & WAITS IN 19367		00165649	16000015	SRV 2015 WTR SYS IMPRVMNTS	11/18/16	254398	1,393.20-
00075 SHOWS DEARMAN & WAITS IN 19360		00165650	16000016	SRV EPA RESPONSE	11/18/16	254398	4,287.50-

SHOWS DEARMAN & WAITS IN							
Sum							22,588.70-

Sum							22,588.70-

CITY OF HATTIESBURG

DOCKET OF CLAIMS

Date - 11/17/16

PERIOD ENDING NOVEMBER 18, 2016

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
COMMUNITY CENTERS' FUND							
00077 ALLEN, YOLANDA (REFUND)	CE ROY CENTE	02017103	16000059	DAMAGE DEPOSIT REFUND	11/18/16	254165	200.00-

ALLEN, YOLANDA (REFUND)							200.00-
Sum							16,677.30-
00077 CITY OF HATTIESBURG FUND	TRF 1ST 11/1	00201752	16000050	TRF 1ST 11/16 PAYROLL	11/08/16	311168	16,677.30-

CITY OF HATTIESBURG FUND							
Sum							16,677.30-
00077 CLAYTON, DR BRIDGET T (R	SHERRILL CEN	02017103	16000062	DAMAGE DEPOSIT REFUND	11/18/16	254216	100.00-

CLAYTON, DR BRIDGET T (R							100.00-
Sum							560.56-
00077 ELKINS WHOLESALE INC	294956-00	00165447	16000041	JANIT SUPP COMM CNTRS	11/18/16	254236	202.88-
00077 ELKINS WHOLESALE INC	295095-00	00165447	16000042	JANIT SUPP COMM CNTRS	11/18/16	254236	180.56-
00077 ELKINS WHOLESALE INC	295096-00-00	00165447	16000043	CREDIT	11/18/16	254236	-----
ELKINS WHOLESALE INC							
Sum							582.88-
00077 G & K SERVICES	1035768113	00165493	16000044	UNIFORMS 10/03 COMM CNTRS	11/18/16	254263	38.86-
00077 G & K SERVICES	1035770365	00165493	16000045	UNIFORMS 10/10 COMM CNTRS	11/18/16	254263	38.86-
00077 G & K SERVICES	1035772573	00165493	16000046	UNIFORMS 10/17 COMM CNTRS	11/18/16	254263	38.86-
00077 G & K SERVICES	1035774785	00165493	16000047	UNIFORMS 10/24 COMM CNTRS	11/18/16	254263	38.86-
00077 G & K SERVICES	1035776982	00165493	16000048	UNIFORMS 10/31 COMM CNTRS	11/18/16	254263	39.22-

G & K SERVICES							
Sum							194.66-
00077 LIFE LINE SCREENING OF A	CULTURAL CEN	02017103	16000065	DAMAGE DEPOSIT REFUND	11/18/16	254306	250.00-

LIFE LINE SCREENING OF A							
Sum							250.00-
00077 MAKAMSON, AUTUMN (REFUND	CULTURAL CEN	02017103	16000060	DAMAGE DEPOSIT REFUND	11/18/16	254312	250.00-

MAKAMSON, AUTUMN (REFUND							
Sum							250.00-
00077 MILLENNIUM MUSIC CENTER	100541	00164561	16000068	SOUND SYSTEM CE ROY CENTER	11/18/16	254325	5,400.00-

MILLENNIUM MUSIC CENTER							
Sum							5,400.00-
00077 MS POWER COMPANY	11/16 COMM C	00020173	16000058	MNTHLY ELEC-COMM CENTERS	11/18/16	254339	3,001.94-

MS POWER COMPANY							
Sum							3,001.94-
00077 PERKINS, TETHRA (REFUND)	SIGLER CENTE	02017103	16000063	DAMAGE DEPOSIT REFUND	11/18/16	254364	100.00-

PERKINS, TETHRA (REFUND)							

Sum							100.00-
00077 PINE BELT TOUGALOO COLLE SHERRILL CEN 02017103 16000066 DAMAGE DEPOSIT REFUND	11/18/16	254372		100.00-			
PINE BELT TOUGALOO COLLE							
Sum				100.00-			
00077 SOLAR SUPPLY INC 3473501 00165769 16000053 A/C SUPP MCNAIR CENTER	11/18/16	254404		171.67-			
SOLAR SUPPLY INC							
Sum				171.67-			
00077 THYSSENKRUPP ELEVATOR CO 3002683933 00165705 16000051 MAINT 8/16-10/16 CULTURAL CTR	11/18/16	254433		908.84-			
00077 THYSSENKRUPP ELEVATOR CO 3002842619 00165778 16000054 MAINT 11/16-1/17 CULTURAL CTR	11/18/16	254433		908.83-			
THYSSENKRUPP ELEVATOR CO							
Sum				1,817.67-			
00077 TRIPLETT, TERRENCE (REFU SHERRILL CEN 02017103 16000061 DAMAGE DEPOSIT REFUND	11/18/16	254435		100.00-			
TRIPLETT, TERRENCE (REFU							
Sum				100.00-			
00077 TYCO INTEGRATED SECURITY 26286718 00165821 16000055 SECURITY 5/1-7/31 CULTURAL CN	11/18/16	254438		340.91-			
00077 TYCO INTEGRATED SECURITY 26823505 00165822 16000056 SECURITY 8/1-10/31 CULTURAL C	11/18/16	254438		359.66-			
00077 TYCO INTEGRATED SECURITY 27353359 00165823 16000057 SECURITY 11/1-1/31 CULTURAL C	11/18/16	254438		359.66-			
TYCO INTEGRATED SECURITY							
Sum				1,060.23-			
00077 WHEELER'S JANITORIAL SUP 038938 00165448 16000052 JANIT SUPP COMM CNTRS	11/18/16	254460		143.50-			
WHEELER'S JANITORIAL SUP							
Sum				143.50-			
00077 WILLMUT GAS & OIL COMPAN 11/16 COMM C 00020173 16000067 MNTHLY GAS-COMM CNTRS	11/18/16	254463		210.44-			
WILLMUT GAS & OIL COMPAN							
Sum				210.44-			
00077 WILSON, RUBY (REFUND) SHERRILL CEN 02017103 16000064 DAMAGE DEPOSIT REFUND	11/18/16	254464		100.00-			
WILSON, RUBY (REFUND)							
Sum				100.00-			
Sum				30,460.29-			

CITY OF HATTIESBURG DOCKET OF CLAIMS PERIOD ENDING NOVEMBER 18, 2016							Date	- 11/17/16
Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount	
TIF CONSTRUCTION								
00091 CITY OF HATTIESBURG FUND 10/2016		00020179	16000002	TRANSFER FUNDS	11/03/16	111339	140,071.25-	
CITY OF HATTIESBURG FUND								
Sum							140,071.25-	
00091 CITY OF HATTIESBURG FUND 10/2016		00020169	16000001	TRANSFER FUNDS	11/03/16	111338	10,500.00-	
CITY OF HATTIESBURG FUND								
Sum							10,500.00-	
Sum							150,571.25-	
Grand Total Level								
Sum							4,476,187.59-	