



**Tuesday, January 7, 2020
5:00 PM**

**City Council
Tuesday Meeting Agenda**

**Council Chambers
200 Forrest Street**

Call to Order

Call to Prayer and Pledge of Allegiance

Presentation Agenda

Agenda Adjustments:

Add Routine Item #9 at the request of the Administration as follows:

- 9. 2020-30** Approve and authorize issuance of manual check for CDBG Program Claims per attached Memorandum (Entitlement CDBG).

POLICY AGENDA

- 1. 2020-15** Approve the minutes for the December 16 & 17, 2019 meetings of the City Council.
- 2. 2020-3** Adopt Resolutions condemning the following properties as unclean and a menace to the health and safety of the community.
- 3. 2020-17** Take from the table to Adopt an Ordinance for the petition filed by John P. Horn, Owner, Marcell Lee, Applicant to change the zoning classification for a certain property located at 89 Industrial Drive (Parcel 2-028A-05-059.00, PPIN 14275, Ward 2) from Section 4.5.13, I-1 (Light Industrial) District to Section 4.5.12, B-5 (Regional Business) District. The Planning Commission recommended to Deny on May 1, 2019.
- 4. 2020-8** Adopt a Resolution authorizing Requisition No. 56 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.
- 5. 2020-4** Approve Supplemental Agreement No. 1 - Final with C. B. Developers to adjust quantities to actual and add additional items for a Net Increase of \$141,098.98 to the contract for Comprehensive Sewer Improvements Project Phase V; Acknowledge receipt of closing

documents; authorize final acceptance of project, payment of invoice and Mayor to execute the same.

6. **2020-5** Approve Joint-Funding Agreement for the period of October 1, 2019 to September 30, 2020 to continue the cooperative program between the U.S. Geological Survey (USGS) and the City of Hattiesburg for the operation and maintenance of the Bouie River Flood Monitoring Site at Glendale Avenue, and for hydrologic modeling and development of inundation maps for the Leaf River, with total cost to the City of \$6,500.00 and authorize the Mayor to execute in duplicate.

7. **2020-6** Approve Agreement with Landry Lewis Germany Architects, P.A. for services related to the roofing project at the former Hattiesburg American Building and authorize the Mayor to execute in duplicate.

8. **2020-10** Approve Memorandum of Understanding with Mississippi State Fire Academy (MSFA) and the Hattiesburg Fire Department to administer the Driver/Operator NFPA 1002: Pumper Field Course and authorize the Mayor to execute the same.

9. **2020-9** Approve Agreement between City of Hattiesburg and Kone Inc. to provide elevator maintenance services at City Hall, Hattiesburg Cultural Center, Municipal Court, and the Pine Street Parking Garage for a two-year period beginning January 1, 2020, and ending December 31, 2021, and authorize the Mayor to execute the same.

10. **2020-2** Authorize submittal of an Amendment to award MS-2017-003-01 with the Federal Transit Administration (FTA) to reprogram remaining funds following the completion of the Mass Transit Operations Facility.

11. **2020-11** Authorize submission of a continuation grant application to the Substance Abuse and Mental Health Services Administration (SAMHSA) to fund the second year of the program Hattiesburg Behavioral Court Treatment Expansion, in partnership with Pine Belt Mental Healthcare Resources, in the amount of \$385,230.

12. **2020-13** Authorize submission of a grant application to the Bloomberg Philanthropies Asphalt Art Initiative grant program in the amount of \$25,000.00 to fund the placement of sidewalk and crosswalk murals at 4 locations.

13. **2020-14** Authorize acceptance of the award for the Mississippi Department of Archives and History (MDAH) Community Heritage Preservation Grant in the amount of \$102,400.00 to fund renovations at F.B. Woodley Elementary School. The grant requires a local match of \$26,400.00 (20% of total project costs), which will be provided by Hattiesburg Public School District; and authorize the Mayor to execute in duplicate.

ROUTINE AGENDA

1. **2020-12** Ratification of submitted grant application to the American in Bloom/CN Railway “EcoConnexions from the Ground Up” grant program, to fund tree and ornamental plantings along Eastside Avenue, for a total project cost of \$50,000 (\$24,750 AIB/CN grant contribution/\$25,250 local match).

2. **2020-7** Approve Plans and Specifications for the Comprehensive Sewer Improvements Cross Creek Parkway Pump Station Rehabilitation project and Authorize advertisement for bids for same.

3. **2020-20** Approve specifications and authorize publication of advertisement for Term Bid Item #11 - Chlorine Gas & Sulfur Dioxide for the Water Department.

4. **2020-21** Approve specifications and authorize publication of advertisement for Term Bid Item #23 - Corrugated HDPE Drainage Pipe for the Public Services Department.

5. **2020-23** Acknowledge receipt of the two-quote docket as provided for in section 31-7-13 (b) of the Mississippi Code of 1972, for the period of September November 25, 2019 through December 26, 2019.

6. **2020-18** Approve the City's purchase of one (1) grave space located in the North Half (N 1/2) of the Southwest Quarter (SW 1/4), Lot 149, Section 25 at Highland Cemetery. Minute Book# 2010/2-359-361 in the amount of \$ 175.00, from Wyvetta Linder, authorize manual check for the same.

7. **2020-19** Approve the sale of grave spaces, per attached Memo's, Receipts, and Deeds.

8. **2020-22** Approve claims docket for the period ending December 31, 2019.

In Memoriam:

- **Mr. Hayward Glenn Anderson**
- **Mr. Joel Bradford “Brad” Vaughn, Sr.**
- **Mr. Jerry Eugene Smith**
- **Mr. Harry Hickman**
- **Mr. William "Bill" Denkler**
- **Mr. Patrick McAdams**
- **Mr. James Burns**
- **Mr. Jay Tarvin**

Meeting Adjourn

MEMORANDUM

TO: City of Hattiesburg Council Members

FROM: Andrew Ellard
Department of Urban Development

SUBJECT: Authorize issuance of manual check for CDBG Program claims

DATE: January 7, 2020

The following request for payment is being submitted for approval during the City Council's January 7, 2020 meeting. Please authorize and approve issuance of manual check for the claim listed below:

Recipient:	Rita Sykes
Activity:	Temporary Relocation Assistance
Program:	CDBG
Project Site:	112 Lesley Lane
Amount Requested:	\$900.00
Purpose of Request:	Payment #1



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ronda Cole, Clerk of Council

cc:

Date: Tuesday, January 7, 2020

Re: Approve the minutes for the December 16 & 17, 2019 meetings of the City Council.
File Number: 2020-15
Minute Book #

Summary

Approval of council meeting minutes.

Recommendation Statement

I recommend approval of the minutes as presented.

Please place this on the January 7, 2020 City Council meeting for consideration.

Call to Order

BE IT REMEMBERED that the **Hattiesburg City Council held a Public Hearing on unsafe properties at 4:00 p.m. Monday, December 16, 2019**, in Council Chambers at City Hall, pursuant to order adopted , November 5, 2019, at Minute Book 2019 Pages 261, to determine if the following properties are in such a state of uncleanliness so as to be a menace to the health and safety of the community.

Those present included Mayor Toby Barker and members of the City Council Jeffrey George, Ward 1; Deborah Delgado, Ward 2; Carter Carroll, Ward 3; Mary Dryden, Ward 4; and Nicholas Brown, Ward 5. Others in attendance included Director of Administration/City Clerk, Kermas Eaton; City Attorney, Randy Pope; Clerk of Council, Ronda S. Cole; Deputy Clerk of Council, Lisa Luu; City staff members; media; and the public.

Council President Carroll called the meeting to order and explained the procedures.

Public Hearing

1. **2019-371** Hold Public Hearing on Monday, December 16, 2019 to determine if certain properties are in such a state of uncleanliness so as to be a menace to the health and safety of the community, according to the provisions of MS Code 1972, Section 21-19-11.

Urban Development Director Andrew Ellard presented the properties to be considered. Mr. Ellard recommended the that the Council adopt resolutions determining the properties are in such a state of uncleanliness so as to be a menace to the health and safety of the community, providing a specified period of time to remove the violations, and declaring the City's intent to take action to clear violations and charge the cost plus penalty against the property if the violations are not resolved in the specified period of time. He recommended resolutions allowing homeowners 15 days to resolve violations.

There were no citizens present who wished to address the Council regarding properties listed for the public hearing.

By unanimous consent, Council President Carroll **closed the public hearing at 4:04 p.m.** and proceeded with the Agenda Adjustments.

Agenda Adjustments

The Clerk of Council read aloud amendments to the agenda as follows:

Add Policy Items #37 and #38 at the request of the Administration.

1. **2019-427** Acknowledge and accept amendments to the Civil Service Rules and Regulations with an effective date of January 1, 2020.

- 2.2019-428
- Approve letter of engagement from Montague, Pittman, Varnado & Hall to provide legal counsel to the Civil Service Commission and attend monthly meetings.

Agenda Review

Council President Carroll proceeded with the Agenda Review.

Regarding Policy Agenda Items #22-#34, Markus Simmons of the Area Development Partnership provided an overview on the Ad Valorem Tax Exemptions.

Following discussion of agenda items, Council President Carroll closed the Agenda Review.

Citizens' Forum

Council Vice President Dryden proceeded with the Citizens' Forum.

She stated the procedures and invited members of the public to speak.

The following citizens addressed the Council:

- Beverly Shaw, 814 Martin Luther King Ave.
- Roger McDowell, 1904 Fuller St.

There were no other citizens present who wished to address the Council.

Council Vice President Dryden closed the Citizen Forum.

- 1.2019-450
- Citizens' Forum Sign-In Sheet, 12-16-19.

Attachments: 12-16-19 Citizens' Forum Sign-In Sheet

Meeting Recess

By unanimous consent, Council President Carroll declared the meeting recessed at 4:35 p.m., this the 16th day of December, 2019.

ATTEST:

APPROVE:

Clerk of Council

Council President

ATTEST AND CERTIFY:

APPROVE:

City Clerk

Mayor

Call to Order

BE IT REMEMBERED that the **regular meeting of the Hattiesburg City Council was held at 5:00 p.m. Tuesday, December 17, 2019**, in Council Chambers at City Hall.

Those present included Mayor Toby Barker and members of the City Council Jeffrey George, Ward 1; Deborah Delgado, Ward 2 (via teleconference); Carter Carroll, Ward 3; Mary Dryden, Ward 4; and Nicholas Brown, Ward 5. Others in attendance included Director of Administration/City Clerk, Kermas Eaton; City Attorney, Randy Pope; Clerk of Council, Ronda S. Cole; Deputy Clerk of Council, Lisa Luu; City staff members; media; and the public.

Council President Carroll Called the meeting to order.

Call to Prayer and Pledge of Allegiance

The prayer was given by Rev. Christian Jordan of Mt. Olive Baptist Church.

The Pledge of Allegiance was led by Assistant Police Chief Peggy Sealy.

Presentation Agenda

The PRESENTATION AGENDA came before the Council.

There were no presentations at this time.

Agenda Adjustments

THE MATTER OF THE AGENDA ORDER came before the Council.

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to add at the request of the as follows:

Add Policy Items #39, #40 and #41 at the request of the Administration

- | | | |
|------------|-----------------|---|
| 39. | 2019-323 | Take from the table Approval or Denial of a petition filed by G&C Funding, LLC, Owner, as required in the Land Development Code, Ord. No. 3209, to request a conditional use as a “Group Facility” as defined by the LDC for a certain property located at 912 Main Street, as per the attached case file. The Planning Commission recommended to Approve with the stipulation of a residency limit of sixteen (16) individuals, on November 6, 2019 - tabled at the November 19th meeting. |
| 40. | 2019-431 | Approve purchase of property, Parcel No. 2-037D-14-158.00, PPIN 22090, located at 715 Greely Street, as per Quick Claim Deed, in the amount of \$1,800.00, appraisals attached, in accordance with Mississippi Code 21-17-1 et seq., and authorize issuance of manual check for the same. |

- 41. 2019-432** Approve the sale of a parcel of undeveloped land located on Dewey Street, Parcel No. 2-029B-03-237.00, PPIN 15186, as per Quit Claim Deed, to Jacob and Alesha Edwards in the amount of \$1900.00, which is the average of the two attached appraisals, and authorize the Mayor to execute Quit Claim Deed.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

POLICY AGENDA

The POLICY AGENDA came before the Council.

- 1. 2019-425** Approve the minutes for the December 2 & 3, 2019 meetings of the City Council.

Attachments: 12-2-19 AR, WS Mins.
12-3-19 Mins.

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Approve the minutes for the December 2 & 3, 2019 meetings of the City Council.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 2. 2019-373** Adopt Resolutions condemning the following properties as unclean and a menace to the health and safety of the community.

Attachments: Adopt Resolutions to Condemn 12-17-19
Case 1: 118 Tuscan Ave
Case 2: 1921 Byron St
Case 3: 105 S. 11th Ave
Case 4: 119 Montague St.
Case 5: 523 Louise Street
Case 6: 525 Louise Street
Case 7: 710 Lincoln St
Case 8: 712 Lincoln St
Case 9: 714 Lincoln St
Case 10: 715 McKinley St.
Case 11: 716 Lincoln St.
Case 12: 718 Lincoln St
Case 13: 718 Webster
Case 14: 719 Lincoln St
Case 15: 722 Lincoln St.
Case 16: 1215 Hall Ave
Case 17: 1405 Penton St

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Adopt Resolutions (#2019-306-322) condemning the following properties as unclean and a menace to the health and safety of the community.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

3. **2019-375** Adopt Resolutions adjudicating and directing the placement as an assessment for the cleanup costs and applicable penalties, not to exceed the values prescribed by State law, against the following properties.

Attachments: Request for Adjudication 12-17-19
16 Longino Rd
116 Wisteria Dr.
313 Rosa Ave
607 Graymont Ave
742 Monroe St.
1705 1st Terrace

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Adopt Resolutions (#2019-323-328) adjudicating and directing the placement as an assessment for the cleanup costs and applicable penalties, not to exceed the values prescribed by State law, against the following properties.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

4. **2019-398** Adopt a Resolution setting Public Hearing on Monday, February 3, 2020 at 4:00 p.m. in the City Council Chambers to determine if certain properties are in such a state of uncleanliness so as to be a menace to the health and safety of the community.

Attachments: Set Public Hearing Feb 3, 2020
Resolution to Set Public Hearing 2-3-2020

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Adopt a Resolution (#2019-329) setting Public Hearing on Monday, February 3, 2020 at 4:00 p.m. in the City Council Chambers to determine if certain properties are in such a state of uncleanliness so as to be a menace to the health and safety of the community..

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

5. **2019-384** Adopt an Ordinance filed by The City of Hattiesburg, as required in the Land Development Code, Ord. No. 3209, to amend the Land Development Code Sections 5, 7, 11 and 13 for the purpose of considering amendments to use types and/or an additional use types, conditions, policy, procedure, and definitions therefore throughout the Land Development Code and to consider amendments related to meetings of the Planning Commission and Board of Adjustment. The Planning Commission recommended to Approve on December 4, 2019.

Attachments: hpc dec item a
hpcdec item a Ordinance - LDC Amendment 12-4-2019
DEC HPC Minutes_draft

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Adopt an Ordinance (#3266) filed by The City of Hattiesburg, as required in the Land Development Code, Ord. No. 3209, to amend the Land Development Code Sections 5, 7, 11 and 13 for the purpose of considering amendments to use types and/or an additional use types, conditions, policy, procedure, and definitions therefore throughout the Land Development Code and to consider amendments related to meetings of the Planning Commission and Board of Adjustment. The Planning Commission recommended to Approve on December 4, 2019.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

6. **2019-385** Adopt an Ordinance filed by Ronald Blackwell, Engineer, and Bennet V. York, Owner, as required in the Land Development Code, Ord. No. 3209, to change the zoning classification for certain properties located on Cross Creek Parkway from Section 4.5.12, B-5 (Regional Business) District to Section 4.5.7, R-3 (Multi-Family Residential) District. The Planning Commission recommended to Approve on December 4, 2019.

Attachments: hpc dec item b
 hpc dec item b Ordinance - Crosscreek Rezone to R3
 DEC HPC Minutes_draft
 DEC HPC Item B Applicant Provided for Meeting

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Adopt an Ordinance (#3267) filed by Ronald Blackwell, Engineer, and Bennet V. York, Owner, as required in the Land Development Code, Ord. No. 3209, to change the zoning classification for certain properties located on Cross Creek Parkway from Section 4.5.12, B-5 (Regional Business) District to Section 4.5.7, R-3 (Multi-Family Residential) District. The Planning Commission recommended to Approve on December 4, 2019.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

7. **2019-387** Approve or Deny a petition filed by Kerri Little, Munn Enterprises, Contractor, and Pediatrtrust, Owner, as required in the Land Development Code, Ord. No. 3209, to request a sign variance from Section 10 Table 10.6-2 Monument Sign “Side Setback”, and allow for a side setback variance of fourteen (14) feet for a proposed sign to be located at 401 S. 40th Avenue. The Board of Adjustment recommended to Approve on December 4, 2019.

Attachments: DEC BOA Minutes_draft
 boa dec item a

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Approve a petition filed by Kerri Little, Munn Enterprises, Contractor, and Pediatrtrust, Owner, as required in the Land Development Code, Ord. No. 3209, to request a sign variance from Section 10 Table 10.6-2 Monument Sign “Side Setback”, and allow for a side setback variance of fourteen (14) feet for a proposed sign to be located at 401 S. 40th Avenue. The Board of Adjustment recommended to Approve on December 4, 2019.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

8. **2019-386** Approve or Deny a petition filed by Marcell Lee, Applicant, and John Horn, Owner, as required in the Land Development Code, Ord. No. 3209, to request a conditional use as a “Senior Adult Daycare Center” as defined by the LDC for a certain property located at 89 Industrial Drive. The Planning Commission recommended to Approve on December 4, 2019.

Attachments: hpc dec item c
 DEC HPC Minutes_draft

A MOTION was made by Council Member Brown and seconded by Council Member George to Approve a petition filed by Marcell Lee, Applicant, and John Horn, Owner, as required in the Land Development Code,

Ord. No. 3209, to request a conditional use as a “Senior Adult Daycare Center” as defined by the LDC for a certain property located at 89 Industrial Drive. The Planning Commission recommended to Approve on December 4, 2019.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 9. 2019-406** Adopt a Resolution authorizing Requisition No. 55 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.

Attachments: 2016 Bond Resolution No. 55
Project Resolution Requisition 2016 Bonds No. 55

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Adopt a Resolution (#2019-330) authorizing Requisition No. 55 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 10. 2019-405** Acknowledge and accept bids received December 5, 2019 for the 38th Avenue Roadway Improvements Project, Federal Aid Project No. STP 0210-00(036) LPA/108080-701000; Approve the bid from Webster Electric Company, LLC in the amount of \$1,191,322.20 as the lowest and best bid, subject to Mississippi Department of Transportation (MDOT) concurrence; Authorize Mayor to execute contracts and MDOT documents as required for the project.

Attachments: 38th Ave Roadway Imps Ltr
38th Ave Roadway Imps Cert Bid Tab
Bid Award Checklist
Bid Evaluation
OCR-481 RJM McQueen
MDOT Concurr Request Ltr

A MOTION was made by Council Member George and seconded by Council Member Brown to Acknowledge and accept bids received December 5, 2019 for the 38th Avenue Roadway Improvements Project, Federal Aid Project No. STP 0210-00(036)LPA/108080-701000; Approve the bid from Webster Electric Company, LLC in the amount of \$1,191,322.20 as the lowest and best bid, subject to Mississippi Department of Transportation (MDOT) concurrence; Authorize Mayor to execute contracts and MDOT documents as required for the project.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 11. 2019-397** Acknowledge offer of Airport Improvement Project grant from the U. S. Department of Transportation-Federal Aviation Administration (FAA) in the amount of \$2,134,424.00 for the Bobby L. Chain Municipal Airport Apron Restoration Part I Project; Authorize Mayor to accept grant and execute all related documents as required by FAA.

Attachments: Hattiesburg Apron Restoration Grant Application - AIP 3-28-0031-0027-2019

(12.9.2019) (002)

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Acknowledge offer of Airport Improvement Project grant from the U. S. Department of Transportation-Federal Aviation Administration (FAA) in the amount of \$2,134,424.00 for the Bobby L. Chain Municipal Airport Apron Restoration Part I Project; Authorize Mayor to accept grant and execute all related documents as required by FAA.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 12. 2019-394** Acknowledge bids received September 7, 2018 for the Bobby L. Chain Municipal Airport Apron Restoration Part I Project and accept the bid from Simmons Erosion Control, Inc. in the amount of \$1,804,056.50 for the base bid; Authorize Mayor to execute contracts in triplicate.

Attachments: [HBGApronRestoreBidTab180907](#)
[Specifications & Contract 1 Bobby L. Chain](#)

A MOTION was made by Council Member Brown and seconded by Council Vice President Dryden to Acknowledge bids received September 7, 2018 for the Bobby L. Chain Municipal Airport Apron Restoration Part I Project and accept the bid from Simmons Erosion Control, Inc. in the amount of \$1,804,056.50 for the base bid; Authorize Mayor to execute contracts in triplicate.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 13. 2019-388** Approve Supplemental Agreement No. 17 with ARE Consultants, Inc. for design engineering services related to the Bobby L. Chain Municipal Airport Apron Restoration Part I Project; Authorize Mayor to execute in duplicate.

Attachments: [HBGSupp17ApronRestorePart1Design](#)

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Approve Supplemental Agreement No. 17 with ARE Consultants, Inc. for design engineering services related to the Bobby L. Chain Municipal Airport Apron Restoration Part I Project; Authorize Mayor to execute in duplicate.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 14. 2019-393** Approve Supplemental Agreement No. 18 with ARE Consultants, Inc. for administration, construction engineering and observation services related to the Bobby L. Chain Airport Apron Restoration Part I Project; Authorize Mayor to execute in duplicate.

Attachments: [HBGSupp18ApronRestPart1AdminConstEngObsR](#)

A MOTION was made by Council Member Brown and seconded by Council Vice President Dryden to Approve Supplemental Agreement No. 18 with ARE Consultants, Inc. for administration, construction

engineering and observation services related to the Bobby L. Chain Airport Apron Restoration Part I Project;

Authorize Mayor to execute in duplicate.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 15. 2019-404** Approve Wastewater Treatment Agreement by and between the City of Hattiesburg and F & H Utilities for the acceptance and treatment of wastewater for the development known as Copperfield Subdivision, pending approval from Public Service Commission; Authorize Mayor to execute in duplicate.

Attachments: Wastewater Treatment Agreement

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Approve Wastewater Treatment Agreement by and between the City of Hattiesburg and F & H Utilities for the acceptance and treatment of wastewater for the development known as Copperfield Subdivision, pending approval from Public Service Commission; Authorize Mayor to execute in duplicate.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 16. 2019-376** Approve Lighting Agreement with Mississippi Power Company to provide additional lighting at 706 Pineview Drive for a monthly increase of \$12.47, and authorize Mayor to execute the same.

Attachments: 706 Pineview Dr Street Light Authorization

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Approve Lighting Agreement with Mississippi Power Company to provide additional lighting at 706 Pineview Drive for a monthly increase of \$12.47, and authorize Mayor to execute the same.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 17. 2019-382** Approve a Processing Agreement between the City and OpenEdge, LLC, for credit card processing services for payments made in the Building, Planning, and Tax Divisions and authorize the Mayor to execute in triplicate.

Attachments: Card Services Agreement-OpenEdge
Merchant Worksheet Form-City of Hattiesburg OpenEdge

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Approve a Processing Agreement between the City and OpenEdge, LLC, for credit card processing services for payments made in the Building, Planning, and Tax Divisions and authorize the Mayor to execute in triplicate.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 18. 2019-360** Approve Service Agreement with MCCi for scanning, converting, indexing and hosting of Minute Books for an amount not to exceed \$20,000.00 and authorize the Mayor to execute the same.

Attachments: Hattiesburg MS Clerk Vault Scanning - Revised 12-10

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Approve Service Agreement with MCCi for scanning, converting, indexing and hosting of Minute Books for an amount not to exceed \$20,000.00 and authorize the Mayor to execute the same.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 19. 2019-379** Approve and authorize issuance of manual check for CDBG Program Claim per the attached memorandum.

Attachments: Habitat - 708 Monroe

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Approve and authorize issuance of manual check for CDBG Program Claim per the attached memorandum.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 20. 2019-380** Approve an amendment to the Community Development Housing Rehabilitation and Housing Repair Grants Program Manual (December 2019 - Temporary Relocation Policy). {Entitlement}

Attachments: Temporary Relocation Policy 12.06.19

A MOTION was made by Council Member George and seconded by Council Member Brown to Approve an amendment to the Community Development Housing Rehabilitation and Housing Repair Grants Program Manual (December 2019 - Temporary Relocation Policy). {Entitlement}

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 21. 2019-381** Approve a Contractor and Owner Agreement and a Housing Repair Grant Award to Gayla Dukes of 103 North 11th Avenue in an amount not to exceed \$10,000 according to the Housing Rehabilitation and Housing Programs Manual Section VIII (E). {Entitlement} and authorize the Mayor to execute in triplicate.

Attachments: Contract. Grant Agreement 12.06.19

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Approve a Contractor and Owner Agreement and a Housing Repair Grant Award to Gayla Dukes of 103 North 11th Avenue in an amount not to exceed \$10,000 according to the Housing Rehabilitation and Housing Programs Manual Section VIII (E). {Entitlement} and authorize the Mayor to execute in triplicate.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 22. 2019-408** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Georgia-Pacific Consumer Operations, LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true

value of \$7,378,819.27 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Georgia-Pacific Consumer Operations LLC tax exemption

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Take from the table a Resolution (#2019-331) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Georgia-Pacific Consumer Operations, LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$7,378,819.27 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 23. 2019-412** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Green Bay Converting, Inc., for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$239,210.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Green Bay Converting, Inc. tax exemption

A MOTION was made by Council Member George and seconded by Council Member Brown to Take from the table a Resolution (#2019-332) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Green Bay Converting, Inc., for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$239,210.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 24. 2019-413** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Hybrid Plastics for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$90,000.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Hybrid Plastics tax exemption

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Take from the table a Resolution (#2019-333) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Hybrid Plastics for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$90,000.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 25. 2019-414** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state

and school district ad valorem taxes to Kohler Company for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$23,791,896.40 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Kohler Company tax exemption

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Take from the table a Resolution (#2019-334) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Kohler Company for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$23,791,896.40 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 26. 2019-415** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Resinall Corporation for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$6,939,951.67 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Resinall Corporation tax exemption

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Take from the table a Resolution (#2019-335) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Resinall Corporation for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$6,939,951.67 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 27. 2019-416** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Sofidel America Corporation for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$353,211.32 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Sofidel America Corporation tax exemption

A MOTION was made by Council Member George and seconded by Council Member Brown to Take from the table a Resolution (#2019-336) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Sofidel America Corporation for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$353,211.32 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 28. 2019-418** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Wis-Pak of Hattiesburg, LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$916,981.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Wis-Pak of Hattiesburg, LLC tax exemption

A MOTION was made by Council Member George and seconded by Council Member Brown to Take from the table a Resolution (#2019-337) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Wis-Pak of Hattiesburg, LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$916,981.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 29. 2019-419** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Zeon Chemicals, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$249,823.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Zeon Chemicals tax exemption

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Take from the table a Resolution (#2019-338) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Zeon Chemicals, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$249,823.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 30. 2019-420** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Western Container for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$3,140,205.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Western Container tax exemption

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Take from the table a Resolution (#2019-339) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Western Container for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$3,140,205.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

Council Vice President Dryden recused herself and left the room at 5:22 p.m.

- 31. 2019-421** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Merchants Company for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$1,397,486.85 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Merchants Company tax exemption

A MOTION was made by Council Member George and seconded by Council Member Brown to Take from the table a Resolution (#2019-340) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Merchants Company for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$1,397,486.85 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 4 - George, Delgado (via teleconference), Carroll and Brown

Nays: 0

Recused: 1 - Dryden

- 32. 2019-422** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Mississippi Tank Company for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$160,211.45 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Mississippi Tank Company tax exemption

A MOTION was made by Council Member George and seconded by Council Member Brown to Take from the table a Resolution (#2019-341) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Mississippi Tank Company for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$160,211.45 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 4 - George, Delgado (via teleconference), Carroll and Brown

Nays: 0

Recused: 1 - Dryden

Council Vice President Dryden re-entered the room at 5:23 p.m.

- 33. 2019-423** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Mar-Jac Poultry MS LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$2,629,911.99 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Mar-Jac Poultry MS LLC tax exemption

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Take from the table a Resolution (#2019-342) granting and allowing ad valorem tax exemption, except state and

school district ad valorem taxes to Mar-Jac Poultry MS LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$2,629,911.99 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 34. 2019-424** Take from the table a Resolution granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Hattiesburg Farm, LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$47,592,512.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

Attachments: Resoulution-Ad Val Exempt-Hattiesburg Farm, LLC
Hattiesburg Farm, LLC Ad Valorem App

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Take from the table a Resolution (#2019-343) granting and allowing ad valorem tax exemption, except state and school district ad valorem taxes to Hattiesburg Farm, LLC, for a period of ten (10) years; commencing on December 31, 2018 and ending December 31, 2027; with a true value of \$47,592,512.00 or the amount approved by Mississippi Department of Revenue - tabled at the November 5, 2019 meeting.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 35. 2019-396** Authorize submittal of an amendment to award MS-2016-007-02 with the Federal Transit Administration (FTA) to reprogram remaining funds following the completion of the Mass Transit Operations Facility.

Attachments: View Print Application - MS-2016-007-02 - Post-Facility Amendment - 12-2019

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Authorize submittal of an amendment to award MS-2016-007-02 with the Federal Transit Administration (FTA) to reprogram remaining funds following the completion of the Mass Transit Operations Facility.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 36. 2019-395** Authorize the Mayor to make submittal for the Blight Elimination Program sponsored by the Mississippi Home Corporation.

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Authorize the Mayor to make submittal for the Blight Elimination Program sponsored by the Mississippi Home Corporation.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 37. 2019-427** Acknowledge and accept amendments to the Civil Service Rules and Regulations with an effective

date of January 1, 2020.

Attachments: Civil Service Rules and Regulations Effective January 1, 2020
Civil Service Letter from Roman Galey 12-13-19

A MOTION was made by Council Member George and seconded by Council Vice President Dryden to Acknowledge and accept amendments to the Civil Service Rules and Regulations with an effective date of January 1, 2020.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 38. 2019-428** Approve letter of engagement from Montague, Pittman, Varnado & Hall to provide legal counsel to the Civil Service Commission and attend monthly meetings.

Attachments: Civil Service Attorney Letter of Engagement 12-16-19 CIVIL SERVICE
COMMISSION LTR
Civil Service Letter from Roman Galey 12-13-19

A MOTION was made by Council Member George and seconded by Council Member Brown to Approve letter of engagement from Montague, Pittman, Varnado & Hall to provide legal counsel to the Civil Service Commission and attend monthly meetings.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 39. 2019-323** Take from the table Approval or Denial of a petition filed by G&C Funding, LLC, Owner, as required in the Land Development Code, Ord. No. 3209, to request a conditional use as a "Group Facility" as defined by the LDC for a certain property located at 912 Main Street, as per the attached case file. The Planning Commission recommended to Approve with the stipulation of a residency limit of sixteen (16) individuals, on November 6, 2019 - tabled at the November 19th meeting.

Attachments: hpc item b nov 19
NOV HPC Minutes
completed application

A MOTION was made by Council Member George and seconded by Council Member Brown to Take from the table Approval of a petition filed by G&C Funding, LLC, Owner, as required in the Land Development Code, Ord. No. 3209, to request a conditional use as a "Group Facility" as defined by the LDC for a certain property located at 912 Main Street, as per the attached case file. The Planning Commission recommended to Approve with the stipulation of a residency limit of sixteen (16) individuals, on November 6, 2019 - tabled at the November 19th meeting.

Amendment was made by Council Member Delgado and seconded by Council Vice President Dryden to limit the residency to 9 individuals, subject to a 3-year review.

Following discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

Council President Carroll called for a vote on the motion as amended.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 40. 2019-431** Approve purchase of property, Parcel No. 2-037D-14-158.00, PPIN 22090, located at 715 Greely Street, as per Quick Claim Deed, in the amount of \$1,800.00, appraisals attached, in accordance with Mississippi Code 21-17-1 et seq., and authorize issuance of manual check for the same.

Attachments: GREELY STREET APPRAISAL-LADD
Greely Street PPIN 22090 - Appraisal Report-Fairley

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to Approve purchase of property, Parcel No. 2-037D-14-158.00, PPIN 22090, located at 715 Greely Street, as per Quick Claim Deed, in the amount of \$1,800.00, appraisals attached, in accordance with Mississippi Code 21-17-1 et seq., and authorize issuance of manual check for the same.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

- 41. 2019-432** Approve the sale of a parcel of undeveloped land located on Dewey Street, Parcel No. 2-029B-03-237.00, PPIN 15186, as per Quit Claim Deed, to Jacob and Alesha Edwards in the amount of \$1900.00, which is the average of the two attached appraisals, and authorize the Mayor to execute Quit Claim Deed.

Attachments: DEWEY STREET APPRAISAL-LADD
Dewey Street Property PPIN 15186 - Appraisal Report-Fairley

A MOTION was made by Council Vice President Dryden and seconded by Council Member Brown to Approve the sale of a parcel of undeveloped land located on Dewey Street, Parcel No. 2-029B-03-237.00, PPIN 15186, as per Quit Claim Deed, to Jacob and Alesha Edwards in the amount of \$1900.00, which is the average of the two attached appraisals, and authorize the Mayor to execute Quit Claim Deed.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

ROUTINE AGENDA

THE ROUTINE AGENDA came before the Council.

A MOTION was made by Council Vice President Dryden and seconded by Council Member George to approve the Routine Agenda.

There being no discussion, the Motion received the affirmative vote of the Council as follows:

Yeas: 5 - George, Delgado (via teleconference), Carroll, Dryden and Brown

Nays: 0

1. **2019-374** Acknowledge Proof of Publications for the month of November 2019.

 Attachments: Proof of Publication Hub City Spokes Nov 2019
2. **2019-377** Acknowledge the monthly budget report for the month ending November 30,2019.

 Attachments: EXP19.1119
 REV.19.1119
3. **2019-383** Acknowledge receipt of Privilege License Monthly Report for November 2019.

 Attachments: PTL Monthly Report-November 2019
4. **2019-389** Acknowledge receipt of a draft update to the Title VI Plan for Hub City Transit; approve a public comment period from December 19, 2019 to January 20, 2020, and authorize publication of the same.

 Attachments: NOTICE FOR PUBLIC COMMENT - Title VI Update draft
 2019-HCT-Title-VI-Plan-DRAFT 12.9.19
5. **2019-401** Acknowledge receipt of a Drainage Release located at PPIN 12975 Lakewood Drive executed by Craig Flanagan.

 Attachments: Drainage Release PPIN 12975 Lakewood Drive - Craig Flanagan
6. **2019-403** Acknowledge receipt of a Drainage Release, executed by Anil Patel, SHS Hattiesburg LLC, for Springhill Suites,6574 Hwy 49N.

 Attachments: Springhill Suites Drainage Release
7. **2019-407** Acknowledge no proposals were received for the Reverse Auction for One (1) Electric Traction Elevator B 5000# by the deadline on December 5, 2019 and Authorize re-advertisement for the Elevator.

 Attachments: NTB-Public Safety Elevator-Rebid
 Specs - Section 14-21-10
 A11.9 Elevator B Plans Section
8. **2019-391** Approve specifications and authorize advertisement for bids for a Regenerative Sweeper Truck for the City of Hattiesburg Public Works Department.

 Attachments: Regenerative Sweeper -Specs
 Regenerative Sweeper- NTB
9. **2019-402** Approve Plans and Specifications for the Big Yank Demolition Project and authorize advertisement for bids for same.

 Attachments: Advertisement for Bids
 3746 - Spec Book-Big Yank Demo
 3746-Final Construction Documents-Plans
10. **2019-390** Approve the sale of grave spaces, per attached Memo's, Receipts and Deeds.

 Attachments: Memo's (12-17-19)
 Receipts (12-17-19)
 Deeds (12-17-19)
11. **2019-378** Approve claims docket for the period ending December 13, 2019.

 Attachments: DOCKET 12-13-19
 Addendum to the claims docket 12-17-19

In Memoriam:

A MOTION was made by Council President Carroll to Adjourn the meeting in memory of:

Meeting Adjourn

By unanimous consent, Council President Carroll declared the meeting adjourned at 5:34 p.m., this 17th day of December, 2019.

ATTEST:

APPROVE:

Clerk of Council

Council President

ATTEST AND CERTIFY:

APPROVE:

City Clerk

Mayor

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INTENTIONALLY**



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc:

Date: Tuesday, January 7, 2020

Re: Adopt Resolutions condemning the following properties as unclean and a menace to the health and safety of the community.
File Number: 2020-3
Minute Book #

Summary

Adopt Resolutions of Condemnation 1/7/2020

Recommendation Statement

I recommend the adoption of resolutions determining that the properties listed in the following attachments are in such a state of uncleanliness so as to be a menace to the health and safety of the community.

Please place this on the January 7, 2020 City Council meeting for consideration.



MAYOR
Toby Barker

COUNCIL - WARD ONE
Jeffrey George

COUNCIL - WARD TWO
Deborah Denard Delgado

COUNCIL - WARD THREE
Carter Carroll

COUNCIL - WARD FOUR
Mary Dryden

COUNCIL - WARD FIVE
Nicholas Brown

MEMORANDUM

TO: Mayor and City Council

FROM: Wiley Quinn, Code Enforcement Manager

DATE: January 6, 2020

RE: Adopt To Condemn

I recommend the adoption of resolutions determining the following properties are in such a state of uncleanliness so as to be a menace to the health and safety of the community.

<u>Address</u>	<u>PPIN #</u>	<u>Ward</u>	<u>Violations</u>
1. 909 E. Laurel Ave.	18386	2	US, AS, DB
2. 920 Elizabeth Ave.	14715	2	AS, DB, OGL
3. 1008 E. Laurel Ave.	19825	2	AS, DB
4. 1212 Putnam Ave.	22468	2	US, AS, OGL, GAR/RUB
5. 1214 Putnam Ave.	22467	2	US, AS, OGL, GAR/RUB
6. Parcel 2-024L-31-004.00 Rawls Springs Loop	27472	1	US, VS, GARB/RUB

Garbage & Rubbish=GAR/RUB
Dangerous Structure=DS
Overgrown Lot=OGL
Open Storage=OS
Unsafe Structure=US

Abandoned Vehicle=AV
Abandoned Building=AB

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

Return to:
City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

RESOLUTION
CONDEMNATION OF UNSAFE AND DILAPIDATED PROPERTY
Case #1: 909 E. Laurel Ave.

WHEREAS, on the 3rd day of December, 2019, the Council of the City of Hattiesburg, Mississippi, passed a resolution announcing the intention of the City Council to hold a hearing on, the 6th day of January, 2020, in the Council Meeting Room of City Hall in Hattiesburg, Mississippi, as provided by Section 21-19-11 of the Mississippi Code of 1972, as annotated and amended, to determine whether or not the following described property is in such a state of uncleanness as to be a menace to the health and safety of the community, to-wit:

2-029P-10-064.00, 909 E. Laurel Ave, Hattiesburg, MS, 39401, and better describe as Lot 4, in Block 14, of Omega Subdivision in the City of Hattiesburg, Forrest County, Mississippi, as per the map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi, together with all improvements thereon and appurtenances thereunto belonging.

WHEREAS, the owner of the property is: Andrew Moore

WHEREAS, proper and timely notice of said hearing was given to said parties more than two weeks prior to the date of the hearing; and

WHEREAS, at said hearing it was determined that the aforementioned property is in such a state of uncleanness as to be a menace to the health and safety of the community and should be condemned.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Hattiesburg, Mississippi, as follows:

1. A period of fifteen (15) days shall be extended to the property owner for removal of the violations listed:

Unsafe Structure (International Property Maintenance Code)
Abandoned Structure (International Property Maintenance Code)
Dilapidated Building (International Property Maintenance Code)

2. If the property owners do not take corrective action within fifteen (15) days to remove the violations, then after a complete and final legal review of the property conducted by the City Attorney, the City will take action to remove all violations listed, said work to be legally contracted with a private contractor or City crews, and the cost of same plus penalty to be certified to the City Clerk for further legal

Disposition.

3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

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 7th day of January, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the 7th day of January, 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

Return to:
City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

RESOLUTION
CONDEMNATION OF UNSAFE AND DILAPIDATED PROPERTY
Case #2: 920 Elizabeth Ave

WHEREAS, on the 3rd day of December, 2019, the Council of the City of Hattiesburg, Mississippi, passed a resolution announcing the intention of the City Council to hold a hearing on, the 6th day of January, 2020, in the Council Meeting Room of City Hall in Hattiesburg, Mississippi, as provided by Section 21-19-11 of the Mississippi Code of 1972, as annotated and amended, to determine whether or not the following described property is in such a state of uncleanness as to be a menace to the health and safety of the community, to-wit:

2-029P-10-164.00, 920 Elizabeth Ave, Hattiesburg, MS, 39401, W20 FT of 10 & E 30 FT of 11
BLK 1 Deason Subdivision

WHEREAS, the owner of the property is: Ray Robinson

WHEREAS, proper and timely notice of said hearing was given to said parties more than two weeks prior to the date of the hearing; and

WHEREAS, at said hearing it was determined that the aforementioned property is in such a state of uncleanness as to be a menace to the health and safety of the community and should be condemned.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Hattiesburg, Mississippi, as follows:

1. A period of fifteen (15) days shall be extended to the property owner for removal of the violations listed:

Overgrown Lot (International Property Maintenance Code)
Abandoned Structure (International Property Maintenance Code)
Dilapidated Building (International Property Maintenance Code)

2. If the property owners do not take corrective action within fifteen (15) days to remove the violations, then after a complete and final legal review of the property conducted by the City Attorney, the City will take action to remove all violations listed, said work to be legally contracted with a private contractor or City crews, and the cost of same plus penalty to be certified to the City Clerk for further legal

Disposition.

3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

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 7th day of January, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the 7th day of January, 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

Return to:
City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

RESOLUTION
CONDEMNATION OF UNSAFE AND DILAPIDATED PROPERTY
Case #3: 1008 E. Laurel Ave

WHEREAS, on the 3rd day of December, 2019, the Council of the City of Hattiesburg, Mississippi, passed a resolution announcing the intention of the City Council to hold a hearing on, the 6th day of January, 2020, in the Council Meeting Room of City Hall in Hattiesburg, Mississippi, as provided by Section 21-19-11 of the Mississippi Code of 1972, as annotated and amended, to determine whether or not the following described property is in such a state of uncleanness as to be a menace to the health and safety of the community, to-wit:

2-029P-10-041.00, 1008 E. Laurel Ave, Hattiesburg, MS, 39401 and better described as Part of Block Two (2) according to the J. E. Kennedy Subdivision of the City of Hattiesburg, Forrest County, Mississippi, particularly described as beginning 175 feet West of the intersection of the North line of Laurel Avenue with West line of Frederick Street, run North 126 feet; thence West 42 feet; thence South 126 feet; thence run East 42 feet to the Point of Beginning.

WHEREAS, the owner of the property is: Michael A. Perine

WHEREAS, proper and timely notice of said hearing was given to said parties more than two weeks prior to the date of the hearing; and

WHEREAS, at said hearing it was determined that the aforementioned property is in such a state of uncleanness as to be a menace to the health and safety of the community and should be condemned.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Hattiesburg, Mississippi, as follows:

1. A period of fifteen (15) days shall be extended to the property owner for removal of the violations listed:

Abandoned Structure (International Property Maintenance Code)
Dilapidated Building (International Property Maintenance Code)

2. If the property owners do not take corrective action within fifteen (15) days to remove the violations, then after a complete and final legal review of the property conducted by the City Attorney, the City will take action to remove all violations listed, said work to be legally contracted with a private contractor or City crews, and the cost of same plus penalty to be certified to the City Clerk for further legal

Disposition.

3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

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 7th day of January, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the 7th day of January, 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

Return to:
City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

RESOLUTION
CONDEMNATION OF UNSAFE AND DILAPIDATED PROPERTY
Case #4: 1212 Putnam Ave

WHEREAS, on the 3rd day of December, 2019, the Council of the City of Hattiesburg, Mississippi, passed a resolution announcing the intention of the City Council to hold a hearing on, the 6th day of January, 2020, in the Council Meeting Room of City Hall in Hattiesburg, Mississippi, as provided by Section 21-19-11 of the Mississippi Code of 1972, as annotated and amended, to determine whether or not the following described property is in such a state of uncleanness as to be a menace to the health and safety of the community, to-wit:

2-030M-11-234.00, 1212 Putnam Ave, Hattiesburg, MS, 39401 and better described as Lots Thirteen (13) and Fourteen (14), Block Thirteen (13) of OMEGA SUBDIVISION in the City of Hattiesburg, County of Forrest, State of Mississippi, as per the map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi, together with all improvements thereon and appurtenances thereunto belonging.

WHEREAS, the owner of the property is: James & Emily Ann McPhail

WHEREAS, proper and timely notice of said hearing was given to said parties more than two weeks prior to the date of the hearing; and

WHEREAS, at said hearing it was determined that the aforementioned property is in such a state of uncleanness as to be a menace to the health and safety of the community and should be condemned.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Hattiesburg, Mississippi, as follows:

1. A period of fifteen (15) days shall be extended to the property owner for removal of the violations listed:

Abandoned Structure (International Property Maintenance Code)
Overgrown Lot(International Property Maintenance Code)
Unsafe Structure (International Property Maintenance Code)
Garbage/Rubbish (International Property Maintenance Code)

2. If the property owners do not take corrective action within fifteen (15) days to remove the violations, then after a complete and final legal review of the property conducted by the City Attorney, the City will take action to remove all violations listed, said work to be legally contracted with a private contractor or City crews, and the cost of same plus penalty to be certified to the City Clerk for further legal

Disposition.

3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

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 7th day of January, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the 7th day of January, 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

Return to:
City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

RESOLUTION
CONDEMNATION OF UNSAFE AND DILAPIDATED PROPERTY
Case #5: 1214 Putnam Ave

WHEREAS, on the 3rd day of December, 2019, the Council of the City of Hattiesburg, Mississippi, passed a resolution announcing the intention of the City Council to hold a hearing on, the 6th day of January, 2020, in the Council Meeting Room of City Hall in Hattiesburg, Mississippi, as provided by Section 21-19-11 of the Mississippi Code of 1972, as annotated and amended, to determine whether or not the following described property is in such a state of uncleanness as to be a menace to the health and safety of the community, to-wit:

2-030M-11-235.00, 1214 Putnam Ave, Hattiesburg, MS, 39401 and better described as Lot 12, Block 13 of Omega Subdivision in City of Hattiesburg, County of Forrest, State of Mississippi, as per the map or plat thereof on file in the Office of the Chancery Clerk of Forrest County, Mississippi.

WHEREAS, the owner of the property is: Felix Shepherd

WHEREAS, proper and timely notice of said hearing was given to said parties more than two weeks prior to the date of the hearing; and

WHEREAS, at said hearing it was determined that the aforementioned property is in such a state of uncleanness as to be a menace to the health and safety of the community and should be condemned.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Hattiesburg, Mississippi, as follows:

1. A period of fifteen (15) days shall be extended to the property owner for removal of the violations listed:

Abandoned Structure (International Property Maintenance Code)
Overgrown Lot (International Property Maintenance Code)
Unsafe Structure (International Property Maintenance Code)
Garbage/Rubbish (International Property Maintenance Code)

2. If the property owners do not take corrective action within fifteen (15) days to remove the violations, then after a complete and final legal review of the property conducted by the City Attorney, the City will take action to remove all violations listed, said work to be legally contracted with a private contractor or City crews, and the cost of same plus penalty to be certified to the City Clerk for further legal

Disposition.

3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

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 7th day of January, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the 7th day of January, 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

Return to:
City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

RESOLUTION
CONDEMNATION OF UNSAFE AND DILAPIDATED PROPERTY
Case #6: 2-024L-31-004.00 Rawls Springs Loop

WHEREAS, on the 3rd day of December, 2019, the Council of the City of Hattiesburg, Mississippi, passed a resolution announcing the intention of the City Council to hold a hearing on, the 6th day of January, 2020, in the Council Meeting Room of City Hall in Hattiesburg, Mississippi, as provided by Section 21-19-11 of the Mississippi Code of 1972, as annotated and amended, to determine whether or not the following described property is in such a state of uncleanliness as to be a menace to the health and safety of the community, to-wit:

2-030M-11-235.00, 1214 Putnam Ave, Hattiesburg, MS, 39401 and better described as Lot 12, Block 13 of Omega Subdivision in City of Hattiesburg, County of Forrest, State of Mississippi, as per the map or plat thereof on file in the Office of the Chancery Clerk of Forrest County, Mississippi.

WHEREAS, the owner of the property is: David Chunn

WHEREAS, proper and timely notice of said hearing was given to said parties more than two weeks prior to the date of the hearing; and

WHEREAS, at said hearing it was determined that the aforementioned property is in such a state of uncleanliness as to be a menace to the health and safety of the community and should be condemned.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Hattiesburg, Mississippi, as follows:

1. A period of fifteen (15) days shall be extended to the property owner for removal of the violations listed:

Vacant Structure (International Property Maintenance Code)
Unsafe Structure (International Property Maintenance Code)
Garbage/Rubbish (International Property Maintenance Code)

2. If the property owners do not take corrective action within fifteen (15) days to remove the violations, then after a complete and final legal review of the property conducted by the City Attorney, the City will take action to remove all violations listed, said work to be legally contracted with a private contractor or City crews, and the cost of same plus penalty to be certified to the City Clerk for further legal

Disposition.

3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

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 7th day of January, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the 7th day of January, 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc:

Date: Tuesday, January 7, 2020

Re: Take from the table to Adopt an Ordinance for the petition filed by John P. Horn, Owner, Marcell Lee, Applicant to change the zoning classification for a certain property located at 89 Industrial Drive (Parcel 2-028A-05-059.00, PPIN 14275, Ward 2) from Section 4.5.13, I-1 (Light Industrial) District to Section 4.5.12, B-5 (Regional Business) District. The Planning Commission recommended to Deny on May 1, 2019.
File Number: 2020-17
Minute Book #

Summary

Adopt an Ordinance to rezone 89 Industrial Drive, Ward 2

Recommendation Statement

Please place this on the January 7, 2020 City Council meeting for consideration.

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
MAY 1, 2019**

The Hattiesburg Planning Commission did meet in a regular session on May 1, 2019 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Mark Miller, Chair, presided over the meeting. A quorum was indicated and the attendance was as follows:

Commissioners Present: Mark Miller, Chair
Amy Hinton, Vice-Chair
Dick Conville
Rhoda A. Pickett
Rebekah Ray
Charlene Allshouse
Kenneth Waites
Judy Corts

Commissioners Absent: James Hughes
Ricardo Bryant

Also Present: Ginger Maddox Lowrey, AICP, Planning Division Manager
Caroline Miles, Planner
Steve Mitchell, Building Official

Chair Miller declared the meeting of the Hattiesburg Planning Commission open and in session at 1:00 PM.

AGENDA REVIEW

There came the matter of the April 2019 Agenda. A request was made by Chair Miller for a motion to approve the April 2019 Agenda. A motion was made to approve the May 2019 Agenda by Commissioner Corts and seconded by Commissioner Pickett.

Commissioners voting aye: Mark Miller, Chair
Amy Hinton, Vice-Chair
Dick Conville
Rhoda A. Pickett

Rebekah Ray
Charlene Allshouse
Kenneth Waites
Judy Corts

Commissioners voting nay: None

MINUTES REVIEW

There came the matter of the April 3, 2019 minutes. A request was made by Chair Miller for a motion to approve the April 3, 2019 minutes. A motion was made by Commissioner Conville to approve the minutes and seconded by Commissioner Ray.

Commissioners voting aye: Mark Miller, Chair
Amy Hinton, Vice-Chair
Dick Conville
Rhoda A. Pickett
Rebekah Ray
Charlene Allshouse
Kenneth Waites
Judy Corts

Commissioners voting nay: None

REPORTS

BUILDING REPORT

There came the matter of the Building Inspection Report. A report for April 2019 was provided by Steve Mitchell, Building Official.

PLANNING REPORT

There came the matter of the Planning Report by Ginger M. Lowrey, AICP, Planning Division Manager. On April 16, the City Council reviewed the following Hattiesburg Planning Commission recommendations and voted as follows: 1028 Main St. zoning change from B-2 to R-1A (HPC approval upheld) and 456 J.M. Tatum Industrial Blvd. zoning change from A-1 to I-1 (HPC approval upheld).

CHAIR'S REPORT

There came the matter of the Chair's Report. Chair Miller emailed the Commissioners an article from *Planning* magazine's column for planning commissioners. The article was on how to avoid conflicts of interest.

PUBLIC HEARING – PLANNING COMMISSION

Chair Miller declared the Public Hearing for the Planning Commission open at 1:10 P.M. and read the rules and procedures of the hearing.

There came the matter of Item A (Zoning change), filed by John P. Horn, Owner, Marcell Lee, Applicant, as required in the Land Development Code, Ord. No. 3209, to change the zoning classification for a certain property located at 89 Industrial Drive (Parcel 2-028A-05-059.00, PPIN 14275, Ward 2) from Section 4.5.13, I-1 (Light Industrial) District to Section 4.5.12, B-5 (Regional Business) District.

	<u>Name</u>	<u>Address</u>	<u>City/State</u>
<u>Presented by:</u>	Norma Carson	90 Wyatt Ellis Rd.	Hattiesburg, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chair Miller declared the Public Hearing closed and the Business Meeting open to vote on the request. The Commissioners admit that while the proposed senior adult daycare at the location is a worthy service, the industrial zoning in this district is very coherent. Some of the Commissioners stated concerns that even though the neighboring businesses have not been active recently, they have the potential to become active light industrial sites at any time. Other Commissioners expressed safety concerns for the self-driving seniors going to daycare and potential hazards that the heavy duty industrial trucks/vehicles on Industrial Drive may pose to the elderly drivers. Commissioner Waites made a motion to Approve the request for rezoning with the basis for approval that there is a public need for the change in question based on the Comprehensive Plan. Commissioner Allhouse seconded the motion.

Commissioners voting aye: Charlene Allshouse
Kenneth Waites

Judy Corts

Commissioners voting nay: Mark Miller, Chair
Amy Hinton, Vice-Chair
Dick Conville
Rebekah Ray

Commissioners abstaining: Rhoda A. Pickett

The vote failed to pass. Commissioner Hinton made a motion to Deny the request for rezoning on the basis that there is not a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property and there is not a public need for the change in question [Specifically, there is no public need for B-5 zoning in this Industrial district]. The motion was seconded by Commissioner Conville.

Commissioners voting aye: Mark Miller, Chair
Amy Hinton, Vice-Chair
Dick Conville
Judy Corts
Rebekah Ray
Rhoda A. Pickett

Commissioners voting nay: Charlene Allshouse

Commissioners abstaining: Kenneth Waites

BUSINESS MEETING

Having no further business, Commissioner Pickett made a motion to adjourn the meeting. The motion was seconded at Commissioner Ray. The meeting was adjourned at 1:41 PM.

Chair Mark Miller

Ginger Maddox Lowrey, AICP, CFM, Planning Division Manager

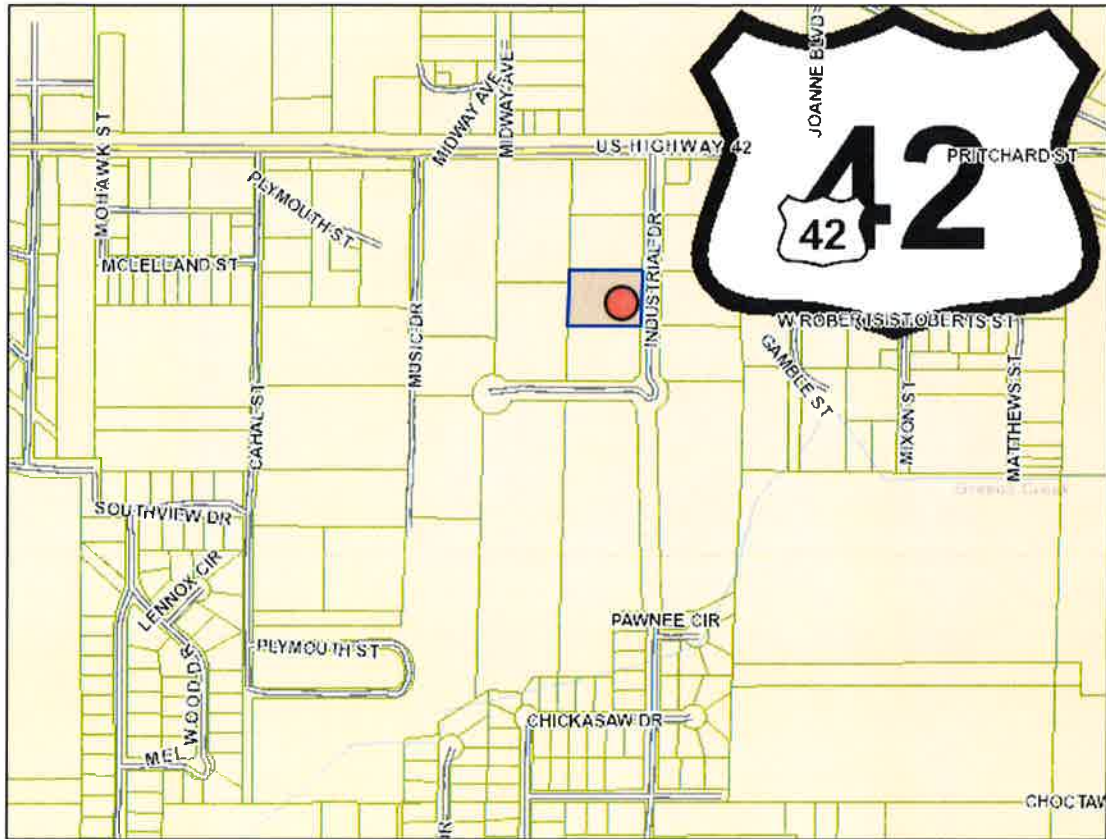
SUBJECT PARCEL: 89 Industrial Drive

Marcell Lee, Applicant, and John P. Horn, Owner

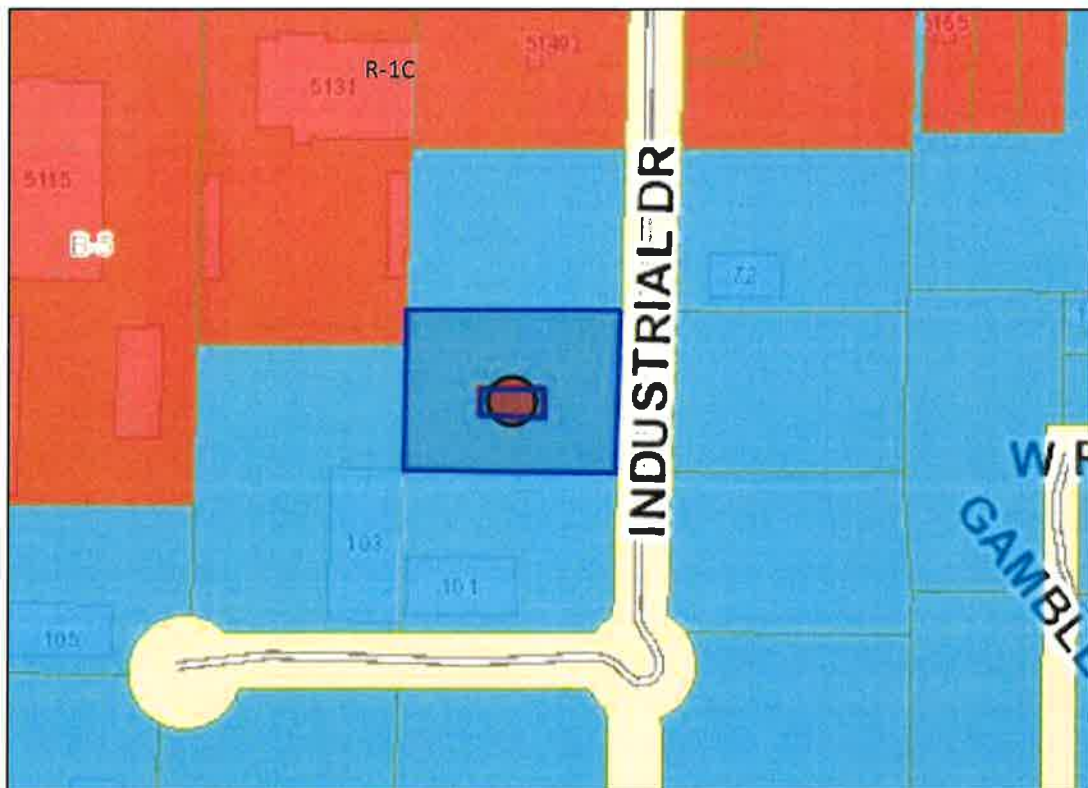
The applicant requests to change the zoning classification for a certain property located at 89 Industrial Drive (Parcel 2-028A-05-059.00, PPIN 14275, Ward 2) from Section 4.5.13, I-1 (Light Industrial) District to Section 4.5.12, B-5 (Regional Business) District.



Vicinity Map—Ward 2



Zoning— I-1



Site Aerial



SURROUNDING AREA

Northern Direction: I-1 (Light Industrial) District / Undeveloped



Southern Direction: I-1 (Light Industrial) District / Warehouse



Eastern Direction: I-1 (Light Industrial) District / Undeveloped

Western Direction: I-1 (Light Industrial) District / Warehouse





**Planning Commission
Case Fact Sheet**

Owner: John P. Horn
Applicant: Marcell Lee

Address of Properties:	Tax Parcels	PPIN:	Ward:
89 Industrial Drive	2-028A-05-059.00	14275	2

Request: **Zoning Change**

Purpose of Request: To consider an application to change the zoning classification for a certain property located at 89 Industrial Drive (Parcel 2-028A-05-059.00, PPIN 14275, Ward 2) from Section 4.5.13, I-1 (Light Industrial) District to Section 4.5.12, B-5 (Regional Business) District.

Applicant Summary: See Attached

Applicable Regulations:

SECTION 4

Zoning Districts Established

4.5.13 B-5 Regional Business District: The purpose of the B-5 District is to provide for retail, personal and business services, offices, and financial services in locations with convenient access to the region's population consistent with comprehensive planning policies. This district is consistent with the Regional Business District in the Comprehensive Plan.

4.5.13 I-1 Light Industrial District: The purpose of the I-1 District is to provide for the development of research, light industrial, office parks, warehouse, and distribution centers consistent with comprehensive planning policies. This district is consistent with the Industry and Corporate Office District in the Comprehensive Plan.

Present Zoning: This parcel is currently zoned I-1 Light Industrial District

Present Use: Vacant building

**Surrounding Zoning
and Land Use:**

North: I-1 (Light Industrial) District / Undeveloped
South: I-1 (Light Industrial) District / Light Industrial
East: I-1 (Light Industrial) District / Undeveloped
West: B-5 (Regional Commercial) District & I-1 (Light Industrial)
District / Commercial & Light Industrial

**Most Nearly
Bounded By (streets):**

This parcel accessible from the east by Industrial Drive and is bounded to the north by Old Hwy 42, to the south by Industrial Drive, and to the west by Music Drive.

**Letters or
Concerns stated:**

The Planning Division Office has not received any letters or other written communications relative to this case as of May 11, 2019.

Background/History:

The applicant is proposing to operate an Adult Daycare at this location. This use is not a permitted use in any Industrial zoning.

Basis for Approval:

1. There is a mistake in the original zoning.
2. The character of the neighborhood **(has / has not)** changed substantially so that rezoning is clearly justified and there **(is / is not)** a public need for the rezoning
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.)

The Current Condition of this area is as follows: The property location for rezoning is on a Cul de sac. There are four other businesses currently in the area. The UPS building, which is the only business operating as industrial in the area. Southeastern Concrete & Gilliland Electronics operates its service offices from these locations. The Remainder business is Golden Touch Car Wash which is an older self-service business. The Old Stokes Distributing Warehouse building next door been vacant 14 years. The property location we are applying for has been vacant 2 plus years. By allowing rezoning for Golden Touch A.D.C. to operate in this location, it will bring new life to this area. Also it will shed light on the location as a safe and visible area which can draw attention to other prospective business to come to the area. This would be growth for the City. We are also servicing the elderly and disabled participants in this community. They are excited about the potential location.

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
LAND DEVELOPMENT CODE ORDINANCE NO. 3209, AS AMENDED,
OF THE CITY OF HATTIESBURG, MISSISSIPPI
FOR A CERTAIN PROPERTY LOCATED AT 89 INDUSTRIAL DRIVE (PARCEL 2-
028A-05-059.00, PPIN 14275, WARD 2) FROM SECTION 4.5.13, I-1 (LIGHT
INDUSTRIAL) DISTRICT TO SECTION 4.5.12, 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. 3209, as amended, of the City of Hattiesburg, Mississippi, be and the same is hereby changed and amended. The Hattiesburg Planning Commission recommended to Deny said change in zoning for the following reasons:

There is not a material change in the circumstances and conditions of the neighborhood and area surrounding the petitioned property and there is not a public need for the change in question, [Specifically, there is no public need for B-5 zoning in this industrial district] based on the comprehensive plan.

Said properties are described as follows:

Lot 8, Block 1 of Commerce Park Subdivision a per the official map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi

SECTION 2. Except as hereby expressly changed and amended, the aforesaid Comprehensive Zoning District Map and the Land Development Code Ordinance No.

3209, 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., 2019.

(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., 2019.

ATTEST:

APPROVED:

CITY CLERK

MAYOR



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, January 7, 2020

Re: Adopt a Resolution authorizing Requisition No. 56 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.
File Number: 2020-8
Minute Book #

Summary

Adopt a Resolution authorizing Requisition No. 56 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.

Recommendation Statement

I recommend approval.

Please place this on the January 7, 2020 City Council meeting for consideration.

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. **56** from the Project Fund Construction Account in connection with the loan agreement between the Mississippi Development Bank and the City dated August 18, 2016. 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. 56 FROM THE PROJECT FUND CONSTRUCTION ACCOUNT IN CONNECTION WITH THAT CERTAIN LOAN AGREEMENT, DATED AS OF AUGUST 18, 2016, BY AND BETWEEN THE MISSISSIPPI DEVELOPMENT BANK AND THE CITY.

Whereas, on August 18, 2016 the City entered into a loan with the Mississippi Development Bank in an amount not to exceed \$25,000,000 (the “Loan”) pursuant to the terms and conditions of that certain loan agreement, dated as of August 18, 2016, 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. **56** from the Project Fund Construction Account under the Loan in the total aggregate amount of **\$621,031.39** 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. **56** from the Project Fund Construction Account under the Loan in the total aggregate amount of **Six Hundred Twenty-One Thousand Thirty-One and 39/100 dollars (\$621,031.39)** 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 Regions Bank, as Trustee to disburse funds of Requisition No. **56** in the total aggregate amount **Six Hundred Twenty-One Thousand Thirty-One and 39/100 dollars (\$621,031.39** 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:

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 **7th** day of **January, 2020**.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the **7th** day of **January, 2020**.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

EXHIBIT A

PROJECT FUND CONSTRUCTION ACCOUNT REQUISITION

PROJECT FUND CONSTRUCTION ACCOUNT REQUISITION

RE: \$25,000,000.00 Mississippi Development Bank Taxable Special Obligation Bonds, Series 2016 (Hattiesburg, Mississippi Combined Water and Sewer System Construction Project) (the "Series 2016 Bonds") secured by \$25,000,000.00 Taxable Promissory Note (Hattiesburg, Mississippi Combined Water and Sewer System Construction Project), dated August 18, 2016 (the "Series 2016 Note").

**TO: Regions Bank
400 West Capitol, 7th Floor
Little Rock, AR 72201
ATTN: Corporate Trust Department**

REQUISITION NO.: 56

DATE OF REQUISITION: 1/7/2020

Item #	Payee Name & Address	Budget Line Item	Payment Amount	Invoice #	Purpose of Payment
1	Suncoast Infrastructure Inc. P O Box 397 1858 Hwy 49 South Florence, MS 39073	093695.7220.75	240,670.50	Pay Est No. 6	CIPP Project Period: 10/28/19 - 11/24/19 MB 2019-20
2	C B Developers, Inc. 1716 Evelyn Gandy Pkwy., Suite 40 Hattiesburg, MS 39401	093695.7220.70	117,360.24	Pay Est No. 16	Sewer Improvements Ph VIII - Camp St. Area Period: 11/1/19 - 11/30/19 MB 2011-4/89-110
3	C B Developers, Inc. 1716 Evelyn Gandy Pkwy., Suite 40 Hattiesburg, MS 39401	093695.7220.54	69,520.62	Pay Est 11	Sewer Improvements Ph V Period: 11/1/18 - 11/30/18 MB: 2017-403
4	C B Developers, Inc. 1716 Evelyn Gandy Pkwy., Suite 40 Hattiesburg, MS 39401	093695.7220.54	109,783.89	Pay Est 12 & Final	Sewer Improvements Ph V Period: 12/1/18 - 4/30/19 MB: 2017-403
5	DNA Underground, LLC 16101 S. Swan Road Gulfport, MS 39503	093695.7220.74	83,696.14	Pay App. No. 5	Sewer Improvements Ph XII Period: 11/1/19 - 11/30/19 MB 2019-58
			<u>621,031.39</u>		



Engineering Progress

December 19, 2019

City of Hattiesburg
Post Office Box 1898
Hattiesburg MS 39403-1898

Attn: Lamar Rutland, P.E.

**RE: Cured In Place Pipe Sewer Repair – Various Locations
City of Hattiesburg**

Dear Mr. Rutland:

Enclosed please find Pay Estimate No. 6 for the above referenced project in the amount of \$240,670.50.

Should you have any questions and/or comments, please, do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'K. Wallace'.

Kyle D. Wallace, P.E.
Project Engineer

/md
Enclosure

cc: Terry Jackson
Suncoast Infrastructure

093695. 7220.75
MB 2019-20

APPLICATION AND CERTIFICATE FOR PAYMENT

Invoice #: S19015-06

To Customer:

CITY OF HATTIESBURG
P.O. BOX 1898
HATTIESBURG, MS 39403

Project:

S19015- CIPP Sewer Repair-Various
Locations, Hattiesburg, MS

Via Engineer:

Shows Dearman & Waits
301 Second Avenue
Hattiesburg, MS 39401

Application No. :

JB App #6

Period From:

10/28/2019

Period To:

11/24/2019

Distribution to :

☐

Owner

☐

Engineer

☐

Contractor

☐

☐

From Contractor:

Suncoast Infrastructure, Inc.
P.O. Box 397
1858 Hwy 49 South
Florence, MS 39073

Owner:

Hattiesburg (City of) MS
P.O. Box 1898
Hattiesburg, MS 39403

External Contract No.

N/A

Contract Date:

1/11/2019

Application Date:

12/4/2019

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Continuation Sheet is attached.

1. Original Contract Sum	\$3,559,581.00
2. Net Change By Change Order	\$0.00
3. Contract Sum To Date	\$3,559,581.00
4. Work Completed To Date	\$1,516,597.50
5. Stored Materials Inventory	\$0.00
6. Total Completed and Stored To Date.	\$1,516,597.50
7. Retainage	
a. Maximum Retainage is in effect.	
b. Securities are furnished in lieu of Retainage.	\$90,000.00
c. Retainage on Work Completed to Date 5.00 %	\$75,829.88
d. Retainage on Stored Materials Inventory 0.00 %	\$0.00
e. Total Calculated Retainage	\$75,829.88
f. Total Retainage To Be Withheld	\$0.00
8. Total Earned Less Retainage	\$1,516,597.50
9. Less Previous Certificates For Payments	\$1,275,927.00
10. Current Payment Due	\$240,670.50
11 Balance to Finish, Plus Retainage.	\$2,042,983.50

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information, and belief, the work covered by this Application for Payment has been completed in accordance with the Contract Documents. That all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: Suncoast Infrastructure, Inc.

By: Ms Min Date: 12/4/2019

State of: Mississippi County of: Rankin

Subscribed and sworn to before me this 4th day of December 2019

Notary Public: Jennifer Laseter

My Commission expires: April 29, 2023



ENGINEER'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Engineer certifies to the Owner that to the best of the Engineer's knowledge, information, and belief, the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$ 240,670.50

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ENGINEER

By: Jh [Signature] Date: 12-18-19

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment, and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CHANGE ORDER SUMMARY	Additions	Deductions
Total changes approved in previous months by Owner	\$0.00	\$0.00
Total Approved this Month	\$0.00	\$0.00
TOTALS	\$0.00	\$0.00
Net Changes By Change Order	\$0.00	

CONTINUATION SHEET

Application and Certification for Payment, containing
Engineer's signed certification is attached.
Tabulations below.

Application No. : JB App #6
Application Date : 12/04/19
Period From: 10/28/19
Period To: 11/24/19

Invoice # : S19015-06

Contract : S19015- CIPP Sewer Repair-Various Locations, Hattiesburg, MS

External Contract No.:

CURRENT CONTRACT						PREVIOUS WORK		THIS PERIOD		JOB TO DATE					
Item No.	Description of Work	UM	Units	Unit Price	Amount	Units	Amount	Units	Amount	Units	Amount	Stored Materials	Total Completed and Stored	Percent Complete	Balance to Finish
1-1	8" CIPP	LF	4,647.00	\$30.00	\$139,410.00	3,601.00	\$108,030.00	0.00	\$0.00	3,601.00	\$108,030.00	\$0.00	\$108,030.00	77.49%	\$31,380.00
1-2	10" CIPP	LF	200.00	\$31.00	\$6,200.00	0.00	\$0.00	314.00	\$9,734.00	314.00	\$9,734.00	\$0.00	\$9,734.00	157.00%	\$-3,534.00
1-3	CIPP Service Lateral	LF	2,420.00	\$152.00	\$367,840.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$367,840.00
1-4	Remove and Replace Service Lateral	LF	810.00	\$40.00	\$32,400.00	596.60	\$23,864.00	372.00	\$14,880.00	968.60	\$38,744.00	\$0.00	\$38,744.00	119.58%	\$-6,344.00
1-5	Cleanout Assembly (As Detailed)	EA	33.00	\$420.00	\$13,860.00	87.00	\$36,540.00	27.00	\$11,340.00	114.00	\$47,880.00	\$0.00	\$47,880.00	345.45%	\$-34,020.00
1-6	Point Repair (8' - 30' Depth)	EA	2.00	\$14,660.00	\$29,320.00	3.00	\$43,980.00	0.00	\$0.00	3.00	\$43,980.00	\$0.00	\$43,980.00	150.00%	\$-14,660.00
1-7	Manhole Rehabilitation	VF	271.00	\$235.00	\$63,685.00	0.00	\$0.00	66.00	\$15,510.00	66.00	\$15,510.00	\$0.00	\$15,510.00	24.35%	\$48,175.00
1-8	Concrete Road Repair	SY	183.00	\$78.00	\$14,274.00	136.00	\$10,608.00	0.00	\$0.00	136.00	\$10,608.00	\$0.00	\$10,608.00	74.32%	\$3,666.00
1-9	Asphalt Road Repair	SY	549.00	\$82.00	\$45,018.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$45,018.00
1-10	Maintenance of Traffic	LS	1.00	\$10,850.00	\$10,850.00	0.75	\$8,137.50	0.00	\$0.00	0.75	\$8,137.50	\$0.00	\$8,137.50	75.00%	\$2,712.50
1-11	Mobilization	LS	1.00	\$74,750.00	\$74,750.00	0.75	\$56,062.50	0.00	\$0.00	0.75	\$56,062.50	\$0.00	\$56,062.50	75.00%	\$18,687.50
1-12	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.75	\$600.00	0.00	\$0.00	0.75	\$600.00	\$0.00	\$600.00	75.00%	\$200.00
1-13	Landscape Restoration	SF	4,050.00	\$0.60	\$2,430.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,430.00
1-14	CCTV Service Lateral	LF	3,230.00	\$10.50	\$33,915.00	3,240.00	\$34,020.00	0.00	\$0.00	3,240.00	\$34,020.00	\$0.00	\$34,020.00	100.31%	\$-105.00
2-1	8" CIPP	LF	2,323.00	\$30.00	\$69,690.00	1,001.00	\$30,030.00	0.00	\$0.00	1,001.00	\$30,030.00	\$0.00	\$30,030.00	43.09%	\$39,660.00
2-2	10" CIPP	LF	1,484.00	\$31.00	\$46,004.00	530.00	\$16,430.00	0.00	\$0.00	530.00	\$16,430.00	\$0.00	\$16,430.00	35.71%	\$29,574.00
2-3	CIPP Service Lateral	LF	338.00	\$105.00	\$35,490.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$35,490.00
2-4	Remove and Replace Service Lateral	LF	113.00	\$40.00	\$4,520.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,520.00
2-5	Cleanout Assembly (As Detailed)	EA	5.00	\$420.00	\$2,100.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,100.00
2-6	Point Repair (8' - 30' Depth)	EA	1.00	\$14,660.00	\$14,660.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$14,660.00
2-7	Protruding Tap to be removed(8' - 30' Depth)	EA	1.00	\$14,660.00	\$14,660.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$14,660.00
2-8	Manhole Rehabilitation	VF	126.00	\$235.00	\$29,610.00	0.00	\$0.00	84.60	\$19,881.00	84.60	\$19,881.00	\$0.00	\$19,881.00	67.14%	\$9,729.00
2-9	Concrete Road Repair	SY	77.00	\$78.00	\$6,006.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,006.00
2-10	Asphalt Road Repair	SY	285.00	\$82.00	\$23,370.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$23,370.00
2-11	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$800.00
2-12	Maintenance of Traffic	LS	1.00	\$10,850.00	\$10,850.00	0.50	\$5,425.00	0.00	\$0.00	0.50	\$5,425.00	\$0.00	\$5,425.00	50.00%	\$5,425.00
2-13	Mobilization	LS	1.00	\$14,200.00	\$14,200.00	0.50	\$7,100.00	0.00	\$0.00	0.50	\$7,100.00	\$0.00	\$7,100.00	50.00%	\$7,100.00
2-14	Landscape Restoration	SF	565.00	\$0.60	\$339.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$339.00
2-15	CCTV Service Lateral	LF	451.00	\$8.50	\$3,833.50	260.00	\$2,210.00	0.00	\$0.00	260.00	\$2,210.00	\$0.00	\$2,210.00	57.65%	\$1,623.50
3-1	8" CIPP	LF	2,944.00	\$30.00	\$88,320.00	1,833.00	\$54,990.00	0.00	\$0.00	1,833.00	\$54,990.00	\$0.00	\$54,990.00	62.26%	\$33,330.00
3-2	CIPP Service Lateral	LF	1,090.00	\$152.00	\$165,680.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$165,680.00

CONTINUATION SHEET

Application and Certification for Payment, containing
Engineer's signed certification is attached.
Tabulations below.

Application No. : JB App #6
Application Date : 12/04/19
Period From: 10/28/19
Period To: 11/24/19

Invoice # : S19015-06

Contract : S19015- CIPP Sewer Repair-Various Locations, Hattiesburg, MS

External Contract No.:

A B C D E F						G H		I J		K L M N O P					
CURRENT CONTRACT						PREVIOUS WORK		THIS PERIOD		JOB TO DATE					
Item No.	Description of Work	UM	Units	Unit Price	Amount	Units	Amount	Units	Amount	Units	Amount	Stored Materials	Total Completed and Stored	Percent Complete	Balance to Finish
3-3	Remove and Replace Service Lateral	LF	363.00	\$40.00	\$14,520.00	0.00	\$0.00	131.00	\$5,240.00	131.00	\$5,240.00	\$0.00	\$5,240.00	36.09%	\$9,280.00
3-4	Cleanout Assembly (As Detailed)	EA	15.00	\$420.00	\$6,300.00	0.00	\$0.00	15.00	\$6,300.00	15.00	\$6,300.00	\$0.00	\$6,300.00	100.00%	\$0.00
3-5	Point Repair (8' - 30' Depth)	EA	1.00	\$14,660.00	\$14,660.00	5.00	\$73,300.00	0.00	\$0.00	5.00	\$73,300.00	\$0.00	\$73,300.00	500.00%	\$-58,640.00
3-6	Manhole Rehabilitation	VF	105.00	\$235.00	\$24,675.00	0.00	\$0.00	30.00	\$7,050.00	30.00	\$7,050.00	\$0.00	\$7,050.00	28.57%	\$17,625.00
3-7	Concrete Road Repair	SY	91.00	\$78.00	\$7,098.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,098.00
3-8	Asphalt Road Repair	SY	274.00	\$82.00	\$22,468.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$22,468.00
3-9	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.00	\$0.00	0.75	\$600.00	0.75	\$600.00	\$0.00	\$600.00	75.00%	\$200.00
3-10	Maintenance of Traffic	LS	1.00	\$14,300.00	\$14,300.00	0.50	\$7,150.00	0.25	\$3,575.00	0.75	\$10,725.00	\$0.00	\$10,725.00	75.00%	\$3,575.00
3-11	Mobilization	LS	1.00	\$14,200.00	\$14,200.00	0.50	\$7,100.00	0.25	\$3,550.00	0.75	\$10,650.00	\$0.00	\$10,650.00	75.00%	\$3,550.00
3-12	Landscape Restoration	SF	1,815.00	\$0.60	\$1,089.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,089.00
3-13	CCTV Service Lateral	LF	1,453.00	\$10.50	\$15,256.50	1,640.00	\$17,220.00	0.00	\$0.00	1,640.00	\$17,220.00	\$0.00	\$17,220.00	112.87%	\$-1,963.50
4-1	8" CIPP	LF	5,871.00	\$30.00	\$176,130.00	2,625.00	\$78,750.00	56.00	\$1,680.00	2,681.00	\$80,430.00	\$0.00	\$80,430.00	45.67%	\$95,700.00
4-2	12" CIPP	LF	2,225.00	\$32.00	\$71,200.00	2,038.00	\$65,216.00	0.00	\$0.00	2,038.00	\$65,216.00	\$0.00	\$65,216.00	91.60%	\$5,984.00
4-3	CIPP Service Lateral	LF	675.00	\$105.00	\$70,875.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$70,875.00
4-4	Remove and Replace Service Lateral	LF	225.00	\$40.00	\$9,000.00	76.00	\$3,040.00	155.00	\$6,200.00	231.00	\$9,240.00	\$0.00	\$9,240.00	102.67%	\$-240.00
4-5	Cleanout Assembly (As Detailed)	EA	9.00	\$420.00	\$3,780.00	0.00	\$0.00	11.00	\$4,620.00	11.00	\$4,620.00	\$0.00	\$4,620.00	122.22%	\$-840.00
4-6	Point Repair (8' - 30' Depth)	EA	2.00	\$14,660.00	\$29,320.00	13.00	\$190,580.00	5.00	\$73,300.00	18.00	\$263,880.00	\$0.00	\$263,880.00	900.00%	\$-234,560.00
4-7	Manhole Rehabilitation	VF	307.00	\$235.00	\$72,145.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$72,145.00
4-8	Concrete Road Repair	SY	144.00	\$78.00	\$11,232.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$11,232.00
4-9	Asphalt Road Repair	SY	485.00	\$82.00	\$39,770.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$39,770.00
4-10	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.75	\$600.00	0.00	\$0.00	0.75	\$600.00	\$0.00	\$600.00	75.00%	\$200.00
4-11	Maintenance of Traffic	LS	1.00	\$5,850.00	\$5,850.00	0.75	\$4,387.50	0.00	\$0.00	0.75	\$4,387.50	\$0.00	\$4,387.50	75.00%	\$1,462.50
4-12	Mobilization	LS	1.00	\$9,200.00	\$9,200.00	0.75	\$6,900.00	0.00	\$0.00	0.75	\$6,900.00	\$0.00	\$6,900.00	75.00%	\$2,300.00
4-13	Landscape Restoration	SF	1,125.00	\$0.60	\$675.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$675.00
4-14	CCTV Service Lateral	LF	900.00	\$8.00	\$7,200.00	745.00	\$5,960.00	0.00	\$0.00	745.00	\$5,960.00	\$0.00	\$5,960.00	82.78%	\$1,240.00
5-1	CIPP Service Lateral	LF	1,388.00	\$105.00	\$145,740.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$145,740.00
5-2	Remove and Replace Service Lateral	LF	463.00	\$40.00	\$18,520.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$18,520.00
5-3	Cleanout Assembly (As Detailed)	EA	19.00	\$420.00	\$7,980.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,980.00
5-4	Hardy St Road Repair	SY	815.00	\$195.00	\$158,925.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$158,925.00
5-5	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$800.00
5-6	Maintenance of Traffic	LS	1.00	\$30,850.00	\$30,850.00	0.25	\$7,712.50	0.00	\$0.00	0.25	\$7,712.50	\$0.00	\$7,712.50	25.00%	\$23,137.50
5-7	Mobilization	LS	1.00	\$17,500.00	\$17,500.00	0.25	\$4,375.00	0.00	\$0.00	0.25	\$4,375.00	\$0.00	\$4,375.00	25.00%	\$13,125.00

CONTINUATION SHEET

Application and Certification for Payment, containing
Engineer's signed certification is attached.
Tabulations below.

Application No. : JB App #6
Application Date : 12/04/19
Period From: 10/28/19
Period To: 11/24/19

Invoice # : S19015-06

Contract : S19015- CIPP Sewer Repair-Various Locations, Hattiesburg, MS

External Contract No.:

A B C D E F						G H		I J		K L M N O P					
CURRENT CONTRACT						PREVIOUS WORK		THIS PERIOD		JOB TO DATE					
Item No.	Description of Work	UM	Units	Unit Price	Amount	Units	Amount	Units	Amount	Units	Amount	Stored Materials	Total Completed and Stored	Percent Complete	Balance to Finish
5-8	Landscape Restoration	SF	2,315.00	\$0.60	\$1,389.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,389.00
5-9	CCTV Service Lateral	LF	1,851.00	\$8.50	\$15,733.50	732.00	\$6,222.00	0.00	\$0.00	732.00	\$6,222.00	\$0.00	\$6,222.00	39.55%	\$9,511.50
6-1	8" CIPP	LF	767.00	\$30.00	\$23,010.00	767.00	\$23,010.00	0.00	\$0.00	767.00	\$23,010.00	\$0.00	\$23,010.00	100.00%	\$0.00
6-2	12" CIPP	LF	198.00	\$32.00	\$6,336.00	198.00	\$6,336.00	0.00	\$0.00	198.00	\$6,336.00	\$0.00	\$6,336.00	100.00%	\$0.00
6-3	CIPP Service Lateral	LF	132.00	\$155.00	\$20,460.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$20,460.00
6-4	Remove and Replace Service Lateral	LF	44.00	\$40.00	\$1,760.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,760.00
6-5	Cleanout Assembly (As Detailed)	EA	2.00	\$420.00	\$840.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$840.00
6-6	Manhole Rehabilitation	VF	48.00	\$235.00	\$11,280.00	0.00	\$0.00	34.80	\$8,178.00	34.80	\$8,178.00	\$0.00	\$8,178.00	72.50%	\$3,102.00
6-7	Concrete Road Repair	SY	17.00	\$78.00	\$1,326.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,326.00
6-8	Asphalt Road Repair	SY	50.00	\$82.00	\$4,100.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,100.00
6-9	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$800.00
6-10	Maintenance of Traffic	LS	1.00	\$5,850.00	\$5,850.00	0.50	\$2,925.00	0.00	\$0.00	0.50	\$2,925.00	\$0.00	\$2,925.00	50.00%	\$2,925.00
6-11	Mobilization	LS	1.00	\$17,500.00	\$17,500.00	0.50	\$8,750.00	0.00	\$0.00	0.50	\$8,750.00	\$0.00	\$8,750.00	50.00%	\$8,750.00
6-12	Landscape Restoration	SF	220.00	\$0.60	\$132.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$132.00
6-13	CCTV Service Lateral	LF	176.00	\$10.50	\$1,848.00	146.00	\$1,533.00	0.00	\$0.00	146.00	\$1,533.00	\$0.00	\$1,533.00	82.95%	\$315.00
7-1	8" CIPP	LF	1,814.00	\$30.00	\$54,420.00	846.00	\$25,380.00	877.00	\$26,310.00	1,723.00	\$51,690.00	\$0.00	\$51,690.00	94.98%	\$2,730.00
7-2	10" CIPP	LF	1,926.00	\$31.00	\$59,706.00	1,830.00	\$56,730.00	0.00	\$0.00	1,830.00	\$56,730.00	\$0.00	\$56,730.00	95.02%	\$2,976.00
7-3	CIPP Service Lateral	LF	770.00	\$105.00	\$80,850.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$80,850.00
7-4	Remove and Replace Service Lateral	LF	257.00	\$40.00	\$10,280.00	0.00	\$0.00	129.00	\$5,160.00	129.00	\$5,160.00	\$0.00	\$5,160.00	50.19%	\$5,120.00
7-5	Cleanout Assembly (As Detailed)	EA	11.00	\$420.00	\$4,620.00	0.00	\$0.00	13.00	\$5,460.00	13.00	\$5,460.00	\$0.00	\$5,460.00	118.18%	\$-840.00
7-6	Manhole Rehabilitation	VF	207.00	\$235.00	\$48,645.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$48,645.00
7-7	Concrete Road Repair	SY	68.00	\$78.00	\$5,304.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,304.00
7-8	Asphalt Road Repair	SY	203.00	\$82.00	\$16,646.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$16,646.00
7-9	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.75	\$600.00	0.00	\$0.00	0.75	\$600.00	\$0.00	\$600.00	75.00%	\$200.00
7-10	Maintenance of Traffic	LS	1.00	\$5,850.00	\$5,850.00	0.75	\$4,387.50	0.00	\$0.00	0.75	\$4,387.50	\$0.00	\$4,387.50	75.00%	\$1,462.50
7-11	Mobilization	LS	1.00	\$17,500.00	\$17,500.00	0.75	\$13,125.00	0.00	\$0.00	0.75	\$13,125.00	\$0.00	\$13,125.00	75.00%	\$4,375.00
7-12	Landscape Restoration	SF	1,285.00	\$0.60	\$771.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$771.00
7-13	CCTV Service Lateral	LF	1,027.00	\$8.50	\$8,729.50	979.00	\$8,321.50	0.00	\$0.00	979.00	\$8,321.50	\$0.00	\$8,321.50	95.33%	\$408.00
AA1-1	10" CIPP (1A)	LF	1,158.00	\$31.00	\$35,898.00	385.00	\$11,935.00	0.00	\$0.00	385.00	\$11,935.00	\$0.00	\$11,935.00	33.25%	\$23,963.00
AA1-2	Manhole Rehabilitation (1A)	VF	35.00	\$235.00	\$8,225.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,225.00
AA1-3	8" CIPP (2A)	LF	910.00	\$30.00	\$27,300.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$27,300.00
AA1-4	Manhole Rehabilitation (2A)	VF	20.00	\$235.00	\$4,700.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,700.00

CONTINUATION SHEET

Application and Certification for Payment, containing
Engineer's signed certification is attached.
Tabulations below.

Application No. : JB App #6
Application Date : 12/04/19
Period From: 10/28/19
Period To: 11/24/19
External Contract No.:

Invoice # : S19015-06

Contract : S19015- CIPP Sewer Repair-Various Locations, Hattiesburg, MS

A B C D E F						G H		I J		K L M N O P					
CURRENT CONTRACT						PREVIOUS WORK		THIS PERIOD		JOB TO DATE					
Item No.	Description of Work	UM	Units	Unit Price	Amount	Units	Amount	Units	Amount	Units	Amount	Stored Materials	Total Completed and Stored	Percent Complete	Balance to Finish
AA1-5	10" CIPP (3A)	LF	270.00	\$31.00	\$8,370.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,370.00
AA1-6	Manhole Rehabilitation (3A)	VF	27.00	\$235.00	\$6,345.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,345.00
AA1-7	8" CIPP (4A)	LF	715.00	\$30.00	\$21,450.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$21,450.00
AA1-8	Manhole Rehabilitation (4A)	VF	12.00	\$235.00	\$2,820.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,820.00
AA1-9	8" CIPP (5A)	LF	1,006.00	\$30.00	\$30,180.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$30,180.00
AA1-10	Manhole Rehabilitation (5A)	VF	32.00	\$235.00	\$7,520.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,520.00
AA1-11	8" CIPP (6A)	LF	1,660.00	\$30.00	\$49,800.00	1,952.00	\$58,560.00	0.00	\$0.00	1,952.00	\$58,560.00	\$0.00	\$58,560.00	117.59%	\$-8,760.00
AA1-12	Manhole Rehabilitation (6A)	VF	60.00	\$235.00	\$14,100.00	0.00	\$0.00	32.90	\$7,731.50	32.90	\$7,731.50	\$0.00	\$7,731.50	54.83%	\$6,368.50
AA1-13	18" CIPP (7A)	LF	848.00	\$95.00	\$80,560.00	850.00	\$80,750.00	0.00	\$0.00	850.00	\$80,750.00	\$0.00	\$80,750.00	100.24%	\$-190.00
AA1-14	Manhole Rehabilitation (7A)	VF	25.00	\$235.00	\$5,875.00	0.00	\$0.00	18.60	\$4,371.00	18.60	\$4,371.00	\$0.00	\$4,371.00	74.40%	\$1,504.00
AA1-15	Remove and Replace Service Lateral	LF	613.00	\$40.00	\$24,520.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$24,520.00
AA1-16	CIPP Service Lateral	LF	1,837.00	\$105.00	\$192,885.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$192,885.00
AA1-17	Cleanout Assembly (As Detailed)	EA	25.00	\$420.00	\$10,500.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$10,500.00
AA1-18	Point Repair (8' - 30' Depth)	EA	2.00	\$14,660.00	\$29,320.00	2.00	\$29,320.00	0.00	\$0.00	2.00	\$29,320.00	\$0.00	\$29,320.00	100.00%	\$0.00
AA1-19	Concrete Road Repair	SY	240.00	\$78.00	\$18,720.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$18,720.00
AA1-20	Asphalt Road Repair	SY	1,500.00	\$82.00	\$123,000.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$123,000.00
AA1-21	Maintenance of Traffic	LS	1.00	\$5,600.00	\$5,600.00	0.75	\$4,200.00	0.00	\$0.00	0.75	\$4,200.00	\$0.00	\$4,200.00	75.00%	\$1,400.00
AA1-22	Mobilization	LS	1.00	\$14,200.00	\$14,200.00	0.75	\$10,650.00	0.00	\$0.00	0.75	\$10,650.00	\$0.00	\$10,650.00	75.00%	\$3,550.00
AA1-23	Temporary Erosion Control	LS	1.00	\$800.00	\$800.00	0.75	\$600.00	0.00	\$0.00	0.75	\$600.00	\$0.00	\$600.00	75.00%	\$200.00
AA1-24	Landscape Restoration	SF	3,065.00	\$0.60	\$1,839.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,839.00
AA1-25	CCTV Service Lateral	LF	2,450.00	\$8.50	\$20,825.00	1,444.00	\$12,274.00	0.00	\$0.00	1,444.00	\$12,274.00	\$0.00	\$12,274.00	58.94%	\$8,551.00
Grand Totals					\$3,559,581.00		\$1,275,927.00		\$240,670.50		\$1,516,597.50	\$0.00	\$1,516,597.50	42.61%	\$2,042,983.50



Engineering Progress

December 13, 2019

City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403-1898

Attn: Lamar Rutland, P.E.

Re: Comprehensive Sewer/Water Improvements – Phase VIII
Camp Street Area
City of Hattiesburg

Dear Lamar:

Enclosed please find Pay Estimate No. 16 for the above referenced project in the amount of \$117,360.24.

Should you have any questions and/or comments, please, do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'John T. Weeks', is written over the word 'Sincerely,'.

John T. Weeks, P.E.
Project Engineer

/md

Enclosure

cc: C.B. Developers
SDW

093695.7220.70
MB 2018-108

514 days
445 days

Contractor's Application For Payment No. 16

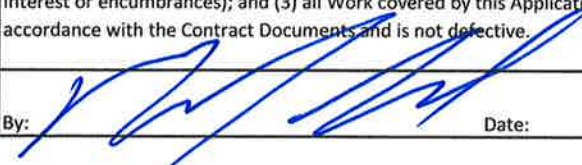
Application Period: Beginning: 11/1/2019 Ending: 11/30/2019		Application Date: 11-Dec-19
To (Owner): CITY OF HATTIESBURG	From (Contractor): C.B. DEVELOPERS, INC.	Via (Engineer): SHOWS, DEARMAN & WAITS, INC.
Project: COMPREHENSIVE SEWER/WATER PHASE 8	Contract:	
Owner's Contract No.: Not Applicable	Contractor's Project No.:	Engineer's Project No.:

Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
SA No. 1	54779.07	
TOTALS	\$ 54,779.07	\$ -
NET CHANGE BY CHANGE ORDERS	\$ 54,779.07	

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By:  Date: 12/11/2019

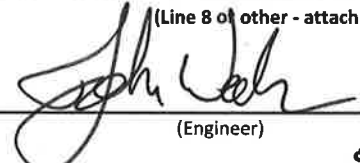
1. ORIGINAL CONTRACT PRICE	\$ 3,721,611.76
2. Net change by Change Orders	\$ 54,779.07
3. CURRENT CONTRACT PRICE (LINE 1 + 2)	\$ 3,776,390.83
4. TOTAL COMPLETED AND STORED TO DATE (Column F on Progress Estimates)	\$ 3,388,803.96
5. RETAINAGE:	
a. 2.5 % x Work Completed	\$ 84,545.63
b. 5.0% x Stored Material	\$ -
c. Total Retainage (line 5a + line 5b)	\$ 84,545.63
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c)	\$ 3,304,258.33
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	\$ 3,186,898.09
8. AMOUNT DUE THIS APPLICATION	\$ 117,360.24
9. BALANCE TO FINISH, PLUS RETAINAGE	
(Column G on Progress Estimate + Line 5 above)	\$ 472,132.50

Payment of:

\$117,360.24

(Line 8 or other - attach explanation of other amount)

Is recommended by:


(Engineer)

12/13/19
(Date)

Payment of:

\$117,360.24

(Line 8 or other - attach explanation of other amount)

Is approved by:

(Owner)

(Date)

Is approved by:

(Owner)

(Date)

Approved by:

(Funding Agency, if applicable)

(Date)

Progress Estimate

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8				Application Number: 16				
Application Period:		11/1/2019 TO 11/30/2019				Application Date: 11-Dec-19				
	A	Bid	Quantity	Unit Price	B	C	D	E	F	G
Pay Item	Item Description				Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)
	CAMP STREET AREA SEWER PIPE ITEMS									
1	8" SDR-26 PVC SEWER PIPE (0-6')	2109.0	\$	48.54	\$ 102,370.86	2172.18	\$ 105,437.62	\$ -	\$ 105,437.62	103%
2	8" SDR-26 PVC SEWER PIPE (6'-8')	5576.0	\$	50.96	\$ 284,152.96	6026.49	\$ 307,109.93	\$ -	\$ 307,109.93	108%
3	8" SDR-26 PVC SEWER PIPE (8'-10')	2961.0	\$	53.38	\$ 158,058.18	3193.55	\$ 170,471.70	\$ -	\$ 170,471.70	108%
4	8" SDR-26 PVC SEWER PIPE (10'-12')	863.0	\$	55.81	\$ 48,164.03	788.78	\$ 44,021.81	\$ -	\$ 44,021.81	91%
5	8" SDR-26 PVC SEWER PIPE (12'-14')	249.0	\$	59.44	\$ 14,800.56	106.00	\$ 6,300.64	\$ -	\$ 6,300.64	43%
6	10" SDR-26 PVC SEWER PIPE (0-6')	25.0	\$	51.64	\$ 1,291.00	48.00	\$ 2,478.72	\$ -	\$ 2,478.72	192%
7	10" SDR-26 PVC SEWER PIPE (6'-8')	351.0	\$	54.06	\$ 18,975.06	451.00	\$ 24,381.06	\$ -	\$ 24,381.06	128%
8	10" SDR-26 PVC SEWER PIPE (8'-10')	325.0	\$	56.48	\$ 18,356.00	334.29	\$ 18,880.70	\$ -	\$ 18,880.70	103%
9	10" SDR-26 PVC SEWER PIPE (10'-12')	239.0	\$	58.91	\$ 14,079.49	324.71	\$ 19,128.67	\$ -	\$ 19,128.67	136%
10	10" SDR-26 PVC SEWER PIPE (12'-14')	130.0	\$	62.54	\$ 8,130.20	101.00	\$ 6,316.54	\$ -	\$ 6,316.54	78%
11	10" SDR-26 PVC SEWER PIPE (14'-16')	67.0	\$	78.28	\$ 5,244.76	76.00	\$ 5,949.28	\$ -	\$ 5,949.28	113%
12	8" DUCTILE IRON SEWER PIPE (0-6')	384.0	\$	79.57	\$ 30,554.88	412.00	\$ 32,782.84	\$ -	\$ 32,782.84	107%
13	8" DUCTILE IRON SEWER PIPE (6'-8')	20.0	\$	89.26	\$ 1,785.20	38.00	\$ 3,391.88	\$ -	\$ 3,391.88	190%
14	10" DUCTILE IRON SEWER PIPE (0-6')	25.0	\$	105.96	\$ 2,649.00		\$ -	\$ -	\$ -	
15	10" DUCTILE IRON SEWER PIPE (6'-8')	30.0	\$	109.59	\$ 3,287.70		\$ -	\$ -	\$ -	
16	REMOVAL OF EXISTING SEWER LINE	10650.0	\$	3.63	\$ 38,659.50	12382.00	\$ 44,946.66	\$ -	\$ 44,946.66	116%
17	ABANDONMENT OF EXISTING SEWER LINE (ALL SIZES)	3220.0	\$	6.67	\$ 21,477.40		\$ -	\$ -	\$ -	
18	TRACER WIRE SYSTEM FOR SEWER	19153.0	\$	1.44	\$ 27,580.32	18859.86	\$ 27,158.20	\$ -	\$ 27,158.20	98%
	SEWER MANHOLE ITEMS									
19	48" PRECAST CONCRETE SEWER MANHOLE (0-6)	6.0	\$	2,339.80	\$ 14,038.80	18.00	\$ 42,116.40	\$ -	\$ 42,116.40	300%
20	48" PRECAST CONCRETE SEWER MANHOLE (6-8)	32.0	\$	3,040.17	\$ 97,285.44	32.00	\$ 97,285.44	\$ -	\$ 97,285.44	100%
21	48" PRECAST CONCRETE SEWER MANHOLE (8-10)	8.0	\$	3,491.71	\$ 27,933.68	9.00	\$ 31,425.39	\$ -	\$ 31,425.39	113%
22	48" PRECAST CONCRETE SEWER MANHOLE (10-12)	1.0	\$	4,051.04	\$ 4,051.04	1.00	\$ 4,051.04	\$ -	\$ 4,051.04	100%
	TOTALS				\$ 942,926.06		\$ 993,634.51	\$ -	\$ 993,634.51	
										\$ (50,708.45)

EJCDC No. C-620 (2002 Edition)

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8				Application Number: 16				
Application Period:		11/1/2019 TO 11/30/2019				Application Date: 11-Dec-19				
	A	Bid Quantity	Unit Price	B	C	D	E	F		G
Pay Item	Item Description			Bid Value	Estimated Quantity Installed	Value	Materials Stored (not In C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (F)
	Subtotal from Previous Page			\$ 942,926.06		\$ 993,634.51	\$ -	\$ 993,634.51		\$ (50,708.45)
23	48" PRECAST CONCRETE SEWER MANHOLE (12-14)	3.0	\$ 4,025.31	\$ 12,075.93	2.00	\$ 8,050.62	\$ -	\$ 8,050.62	67%	\$ 4,025.31
24	48" PRECAST CONCRETE SEWER MANHOLE (0-6) (FLAT TOP)	3.0	\$ 3,553.84	\$ 10,661.52	1.00	\$ 3,553.84	\$ -	\$ 3,553.84	33%	\$ 7,107.68
25	60" PRECAST CONCRETE SEWER MANHOLE (0-6)	1.0	\$ 4,502.46	\$ 4,502.46		\$ -	\$ -	\$ -		\$ 4,502.46
26	60" PRECAST CONCRETE SEWER MANHOLE (6-8)	1.0	\$ 5,058.41	\$ 5,058.41	1.00	\$ 5,058.41	\$ -	\$ 5,058.41	100%	\$ -
27	60" PRECAST CONCRETE SEWER MANHOLE (8-10)	1.0	\$ 5,419.09	\$ 5,419.09	1.00	\$ 5,419.09	\$ -	\$ 5,419.09	100%	\$ -
28	60" PRECAST CONCRETE SEWER MANHOLE (10-12)	1.0	\$ 6,342.23	\$ 6,342.23	1.00	\$ 6,342.23	\$ -	\$ 6,342.23	100%	\$ -
29	60" PRECAST CONCRETE SEWER MANHOLE (6-8) (DOGHOUSE)	2.0	\$ 6,620.27	\$ 13,240.54		\$ -	\$ -	\$ -		\$ 13,240.54
30	72" PRECAST CONCRETE SPLITTER SEWER MANHOLE (10-12) (C	1.0	\$ 9,100.91	\$ 9,100.91		\$ -	\$ -	\$ -		\$ 9,100.91
31	DEMOLITION AND REMOVAL OF EXISTING MANHOLES (ALL TY	35.0	\$ 302.70	\$ 10,594.50	45.00	\$ 13,621.50	\$ -	\$ 13,621.50	129%	\$ (3,027.00)
32	ABANDONMENT OF EXISTING MANHOLE	12.0	\$ 393.51	\$ 4,722.12	3.00	\$ 1,180.53	\$ -	\$ 1,180.53	25%	\$ 3,541.59
33	DROP MANHOLE ASSEMBLY (ALL DEPTHS)	1.0	\$ 2,674.73	\$ 2,674.73		\$ -	\$ -	\$ -		\$ 2,674.73
	SEWER SERVICE ITEMS									
34	4" SANITARY SEWER SERVICE CLEANOUT	231.0	\$ 375.31	\$ 86,696.61	228.00	\$ 85,570.68	\$ -	\$ 85,570.68	99%	\$ 1,125.93
35	4" SDR-26 PVC PIPE SANITARY SEWER SERVICE (INCL FITTINGS)	316.0	\$ 39.97	\$ 12,630.52	721.00	\$ 28,818.37	\$ -	\$ 28,818.37	228%	\$ (16,187.85)
36	6" SDR-26 PVC PIPE SANITARY SEWER SERVICE (INCL FITTINGS)	3792.0	\$ 27.33	\$ 103,635.36	3,908.00	\$ 106,805.64	\$ -	\$ 106,805.64	103%	\$ (3,170.28)
37	8"x8"x6" PVC SERVICE TEE	203.0	\$ 191.79	\$ 38,933.37	207.00	\$ 39,700.53	\$ -	\$ 39,700.53	102%	\$ (767.16)
38	10"x10"x6" PVC SERVICE TEE	20.0	\$ 417.00	\$ 8,340.00	19.00	\$ 7,923.00	\$ -	\$ 7,923.00	95%	\$ 417.00
39	8"x8"x6" DUCTILE IRON SERVICE TEE	5.0	\$ 825.41	\$ 4,127.05	3.00	\$ 2,476.23	\$ -	\$ 2,476.23	60%	\$ 1,650.82
	WATER PIPE ITEMS									
40	2" & UNDER 150 PSI PVC WATER PIPE FOR CONNECTIONS (OP	40.0	\$ 13.39	\$ 535.60		\$ -	\$ 42.40	\$ 42.40	8%	\$ 493.20
41	6" CLASS 350 DUCTILE IRON WATER PIPE (OPEN CUT)	8340.0	\$ 26.87	\$ 224,095.80	7,884.00	\$ 211,843.08	\$ -	\$ 211,843.08	95%	\$ 12,252.72
42	8" CLASS 350 DUCTILE IRON WATER PIPE (OPEN CUT)	4680.0	\$ 32.38	\$ 151,538.40	5,354.00	\$ 173,362.52	\$ -	\$ 173,362.52	114%	\$ (21,824.12)
43	8" 200 PSI, DR9, HDPE (DIRECTIONAL BORE) (INCL ADAPTER F	500.0	\$ 52.33	\$ 26,165.00	1,200.00	\$ 62,796.00	\$ -	\$ 62,796.00	240%	\$ (36,631.00)
44	10" 200 PSI, DR9, HDPE (DIRECTIONAL BORE) (INCL ADAPTER F	360.0	\$ 67.53	\$ 24,310.80	200.00	\$ 13,506.00	\$ -	\$ 13,506.00	56%	\$ 10,804.80
45	TRACER WIRE SYSTEM FOR WATER	22864.0	\$ 1.33	\$ 30,409.12	19,432.50	\$ 25,845.23	\$ 3,431.50	\$ 29,276.73	96%	\$ 1,132.40
	TOTALS			\$ 1,798,736.13		\$ 1,795,508.01	\$ 3,473.90	\$ 1,798,981.91		\$ (60,245.78)

EFDC No. C-620 (2002 Edition)

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8				Application Number: 16					
Application Period:		11/1/2019 TO 11/30/2019				Application Date: 11-Dec-19					
	A	Bid Quantity	Unit Price	B	C	D	E	F		G	
Pay Item	Item Description			Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (F)	(B
	Subtotal from Previous Page			\$ 1,738,736.13		\$ 1,795,508.01	\$ 3,473.90	\$ 1,798,981.91		\$ (60,245.78)	
	WATER CONNECTION ITEMS										
46	CUT AND CAP EXISTING WATER LINE IN PLACE	6.0	\$ 644.87	\$ 3,869.22	2.00	\$ 1,289.74	\$ 466.00	\$ 1,755.74	45%	\$ 2,113.48	
47	CONNECTION: PROPOSED 6" TO EXISTING 2" (STRAIGHT-REDU	1.0	\$ 1,038.87	\$ 1,038.87		\$ -	\$ 222.00	\$ 222.00	21%	\$ 816.87	
48	CONNECTION: PROPOSED 6" TO EXISTING 6" (STRAIGHT-COU	2.0	\$ 1,006.18	\$ 2,012.36	2.00	\$ 2,012.36	\$ -	\$ 2,012.36	100%	\$ -	
49	CONNECTION: PROPOSED 6" TO EXISTING 6" (TEE & OTHER FI	3.0	\$ 1,549.82	\$ 4,649.46	2.00	\$ 3,099.64	\$ -	\$ 3,099.64	67%	\$ 1,549.82	
50	CONNECTION: PROPOSED 6" TO EXISTING 6" (HOT TAP w/ VA	8.0	\$ 3,500.42	\$ 28,003.36	12.00	\$ 42,005.04	\$ -	\$ 42,005.04	150%	\$ (14,001.68)	
51	CONNECTION: PROPOSED 6" TO EXISTING 12" (HOT TAP w/ V	2.0	\$ 4,419.42	\$ 8,838.84	2.00	\$ 8,838.84	\$ -	\$ 8,838.84	100%	\$ -	
52	CONNECTION: PROPOSED 6" TO PROPOSED 6" (TEE & OTHER	1.0	\$ 934.74	\$ 934.74	1.00	\$ 934.74	\$ -	\$ 934.74	100%	\$ -	
53	CONNECTION: PROPOSED 8" TO EXISTING 6" (TEE & OTHER FI	11.0	\$ 1,657.59	\$ 18,233.49	7.00	\$ 11,603.13	\$ -	\$ 11,603.13	64%	\$ 6,630.36	
54	CONNECTION: PROPOSED 8" TO EXISTING 6" (HOT TAP w/ VA	1.0	\$ 4,269.28	\$ 4,269.28	2.00	\$ 8,538.56	\$ -	\$ 8,538.56	200%	\$ (4,269.28)	
55	CONNECTION: PROPOSED 8" TO EXISTING 8" (HOT TAP w/ VA	1.0	\$ 4,881.95	\$ 4,881.95	1.00	\$ 4,881.95	\$ -	\$ 4,881.95	100%	\$ -	
56	CONNECTION: PROPOSED 8" TO EXISTING 12" (HOT TAP w/ V	3.0	\$ 6,336.12	\$ 19,008.36	4.00	\$ 25,344.48	\$ -	\$ 25,344.48	133%	\$ (6,336.12)	
57	CONNECTION: PROPOSED 8" TO PROPOSED 6" (TEE & OTHER	5.0	\$ 1,129.68	\$ 5,648.40	6.00	\$ 6,778.08	\$ -	\$ 6,778.08	120%	\$ (1,129.68)	
58	CONNECTION: PROPOSED 8" TO PROPOSED 8" (TEE & OTHER	3.0	\$ 1,145.42	\$ 3,436.26	3.00	\$ 3,436.26	\$ -	\$ 3,436.26	100%	\$ -	
	WATER VALVE ITEMS										
59	6" GATE VALVE	27.0	\$ 870.57	\$ 23,505.39	24.00	\$ 20,893.68	\$ 1,707.00	\$ 22,600.68	96%	\$ 904.71	
60	8" GATE VALVE	22.0	\$ 1,162.37	\$ 25,572.14	22.00	\$ 25,572.14	\$ -	\$ 25,572.14	100%	\$ -	
	WATER FIRE PROTECTION ITEMS										
61	3 WAY FIRE HYDRANT w/ APPURTENANCES (INCL TEE, VALVE,	16.0	\$ 3,703.84	\$ 59,261.44	22.00	\$ 81,484.48	\$ -	\$ 81,484.48	138%	\$ (22,223.04)	
62	REMOVAL OF EXISTING FIRE HYDRANT	9.0	\$ 787.02	\$ 7,083.18		\$ -	\$ -	\$ -		\$ 7,083.18	
	WATER SERVICE ITEMS										
63	SERVICE TAP (3/4") (INCL, TAPPING SADDLE, CORP STOP, ETC.	242.0	\$ 412.88	\$ 99,916.96	176.00	\$ 72,666.88	\$ -	\$ 72,666.88	73%	\$ 27,250.08	
64	SERVICE TAP (1") (INCL, TAPPING SADDLE, CORP STOP, ETC.)	33.0	\$ 760.38	\$ 25,092.54	14.00	\$ 10,645.32	\$ 1,109.70	\$ 11,755.02	47%	\$ 13,337.52	
65	SERVICE TUBING (OPEN CUT) (3/4")	1985.0	\$ 6.28	\$ 12,465.80	828.50	\$ 5,202.98	\$ -	\$ 5,202.98	42%	\$ 7,262.82	
66	SERVICE TUBING (OPEN CUT) (1")	400.0	\$ 6.41	\$ 2,564.00	105.00	\$ 673.05	\$ -	\$ 673.05	26%	\$ 1,890.95	
	TOTALS			\$ 2,099,022.17		\$ 2,131,409.36	\$ 6,978.60	\$ 2,138,387.96		\$ (39,365.79)	

EJCDC No. C-620 (2002 Edition)

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Progress Estimate

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8				Application Number: 16				
Application Period:		11/1/2019 TO 11/30/2019				Application Date: 11-Dec-19				
Pay Item	Item Description	Bid Quantity	Unit Price	Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (G)
	Subtotal from Previous Page			\$ 2,099,022.17		\$ 2,131,409.36	\$ 6,978.60	\$ 2,138,387.96		\$ (39,365.79)
67	SERVICE TUBING (BORED) (3/4")	4080.0	\$ 9.92	\$ 40,473.60	3,907.00	\$ 38,757.44	\$ -	\$ 38,757.44	96%	\$ 1,716.16
68	SERVICE TUBING (BORED) (1")	400.0	\$ 10.04	\$ 4,016.00	124.00	\$ 1,244.96	\$ -	\$ 1,244.96	31%	\$ 2,771.04
69	WATER SERVICE METER (3/4")	13.0	\$ 440.65	\$ 5,728.45	13.00	\$ 5,728.45	\$ -	\$ 5,728.45	100%	\$ -
70	WATER SERVICE METER (1")	2.0	\$ 652.32	\$ 1,304.64		\$ -	\$ -	\$ -		\$ 1,304.64
	MISCELLANEOUS CONSTRUCTION ITEMS									
71	CRUSHED AGGREGATE (SIZE 825)	5097.0	\$ 49.58	\$ 252,709.26	7669.88	\$ 380,272.65	\$ -	\$ 380,272.65	150%	\$ (127,563.39)
72	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	23770.0	\$ 7.68	\$ 182,553.60	23101.00	\$ 177,415.68	\$ -	\$ 177,415.68	97%	\$ 5,137.92
73	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	1062.0	\$ 65.38	\$ 69,433.56	790.60	\$ 51,689.43	\$ -	\$ 51,689.43	74%	\$ 17,744.13
74	HARDY STREET ROADWAY REPAIR (SPECIAL CONSTRUCTION)	50.0	\$ 332.97	\$ 16,648.50	20.10	\$ 6,692.70	\$ -	\$ 6,692.70	40%	\$ 9,955.80
75	9.5 MM HOT MIX ASPHALT	1652.0	\$ 133.94	\$ 221,268.88	557.90	\$ 74,725.13	\$ -	\$ 74,725.13	34%	\$ 146,543.75
76	19 MM HOT MIX ASPHALT	1273.0	\$ 173.59	\$ 220,980.07		\$ -	\$ -	\$ -		\$ 220,980.07
77	CONCRETE SIDEWALK REPAIR (ALL DEPTHS)	55.0	\$ 66.59	\$ 3,662.45	172.70	\$ 11,500.09	\$ -	\$ 11,500.09	314%	\$ (7,837.64)
78	CONCRETE CURB & GUTTER (MATCH EXISTING TYPE)	370.0	\$ 96.86	\$ 35,838.20	347.50	\$ 33,658.85	\$ -	\$ 33,658.85	94%	\$ 2,179.35
79	CONCRETE DITCH REPAIR	95.0	\$ 26.64	\$ 2,530.80		\$ -	\$ -	\$ -		\$ 2,530.80
80	CLASS "B" CONCRETE, MINOR STRUCTURES	10.0	\$ 1,816.20	\$ 18,162.00	4.17	\$ 7,573.55	\$ -	\$ 7,573.55	42%	\$ 10,588.45
81	REINFORCING STEEL	470.0	\$ 4.18	\$ 1,964.60	153.00	\$ 639.54	\$ -	\$ 639.54	33%	\$ 1,325.06
82	INLET GRATINGS	765.0	\$ 6.87	\$ 5,255.55	127.00	\$ 872.49	\$ -	\$ 872.49	17%	\$ 4,383.06
83	INLET CASTINGS	79.0	\$ 6.20	\$ 489.80		\$ -	\$ -	\$ -		\$ 489.80
84	12" CORRUGATED HDPE PIPE (DUAL WALL)	64.0	\$ 25.55	\$ 1,635.20	485.00	\$ 12,391.75	\$ -	\$ 12,391.75	758%	\$ (10,756.55)
85	15" CORRUGATED HDPE PIPE (DUAL WALL)	20.0	\$ 40.48	\$ 809.60	20.00	\$ 809.60	\$ -	\$ 809.60	100%	\$ -
86	12" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)	32.0	\$ 30.83	\$ 986.56		\$ -	\$ -	\$ -		\$ 986.56
87	15" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)	370.0	\$ 27.86	\$ 10,308.20	186.00	\$ 5,181.96	\$ -	\$ 5,181.96	50%	\$ 5,126.24
88	18" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)	210.0	\$ 32.66	\$ 6,858.60	203.00	\$ 6,629.98	\$ -	\$ 6,629.98	97%	\$ 228.62
89	18"x11" REINFORCED CONCRETE ARCH PIPE (CLASS 3) (PLASTIC)	76.0	\$ 50.08	\$ 3,806.08	88.00	\$ 4,407.04	\$ -	\$ 4,407.04	116%	\$ (600.96)
90	REMOVAL OF EXISTING PIPE CROSS DRAINS (ALL SIZES AND DEPTHS)	750.0	\$ 2.42	\$ 1,815.00	697.00	\$ 1,686.74	\$ -	\$ 1,686.74	93%	\$ 128.26
	TOTALS			\$ 3,208,261.37		\$ 2,953,287.39	\$ 6,978.60	\$ 2,960,265.99		\$ 247,995.38

EJCDC No. C-620 (2002 Edition)

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Contractor's Application

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Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
	CAMP STREET AREA SEWER PIPE ITEMS																	
1	8" SDR-26 PVC SEWER PIPE (0-6')			228.29	97.14	289	438	341	74.89		49	-15.14	239	159	272			2172.18
2	8" SDR-26 PVC SEWER PIPE (6'-8')			894.76	649.87	1073	103	203	364.11	50.55	1332	-51.8	259	409	740			6026.49
3	8" SDR-26 PVC SEWER PIPE (8'-10')		651	832.1	660.18	203	96	88	152	119.52	45	183.75		83	80			3193.55
4	8" SDR-26 PVC SEWER PIPE (10'-12')		178	269.85	108.68		152	3		35.93		-108.68		150				788.78
5	8" SDR-26 PVC SEWER PIPE (12'-14')				34.99							-34.99		106				106
6	10" SDR-26 PVC SEWER PIPE (0-6')												48					48
7	10" SDR-26 PVC SEWER PIPE (6'-8')	5.36	94.64								128		70	153				451
8	10" SDR-26 PVC SEWER PIPE (8'-10')	147.29	75										50	62				334.29
9	10" SDR-26 PVC SEWER PIPE (10'-12')	207.35	36.36										33	48				324.71
10	10" SDR-26 PVC SEWER PIPE (12'-14')													101				101
11	10" SDR-26 PVC SEWER PIPE (14'-16')													76				76
12	8" DUCTILE IRON SEWER PIPE (0-6')			18				181	36	146		19		12				412
13	8" DUCTILE IRON SEWER PIPE (6'-8')													38				38
14	10" DUCTILE IRON SEWER PIPE (0-6')																	
15	10" DUCTILE IRON SEWER PIPE (6'-8')																	
16	REMOVAL OF EXISTING SEWER LINE	360	1035	1809	768	1565	789	816	591	352	913	724	699	869	1092			12382
17	ABANDONMENT OF EXISTING SEWER LINE (ALL SIZES)																	
18	TRACER WIRE SYSTEM FOR SEWER	420	1146	2647	2145.86	1908	1089	1008	783	404	2018	1010	864	1564	1768	85		18859.86
	SEWER MANHOLE ITEMS																	
19	48" PRECAST CONCRETE SEWER MANHOLE (0-6)			1	1	2	1	3	2		2	1		3		2		18
20	48" PRECAST CONCRETE SEWER MANHOLE (6-8)			5	1	5				1	7	1	3	3	5			32
21	48" PRECAST CONCRETE SEWER MANHOLE (8-10)		2	2	2		1					1		1				9
22	48" PRECAST CONCRETE SEWER MANHOLE (10-12)		1															1

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
23	48" PRECAST CONCRETE SEWER MANHOLE (12-14)												1	1				2
24	48" PRECAST CONCRETE SEWER MANHOLE (0-6) (FLAT TOP)							1										1
25	60" PRECAST CONCRETE SEWER MANHOLE (0-6)																	
26	60" PRECAST CONCRETE SEWER MANHOLE (6-8)	1																1
27	60" PRECAST CONCRETE SEWER MANHOLE (8-10)											1						1
28	60" PRECAST CONCRETE SEWER MANHOLE (10-12)		1															1
29	60" PRECAST CONCRETE SEWER MANHOLE (6-8) (DOGHOUSE)																	
30	72" PRECAST CONCRETE SPLITTER SEWER MANHOLE (10-12) (DOGHOUSE)																	
31	DEMOLITION AND REMOVAL OF EXISTING MANHOLES (ALL TYPES)		5	8	4	3	1	3	1	1	4	5	1	5	4			45
32	ABANDONMENT OF EXISTING MANHOLE																3	3
33	DROP MANHOLE ASSEMBLY (ALL DEPTHS)																	
	SEWER SERVICE ITEMS																	
34	4" SANITARY SEWER SERVICE CLEANOUT	3	4	23	31	22	15	13	14	4	20	14	16	17	25	7		228
35	4" SDR-26 PVC PIPE SANITARY SEWER SERVICE (INCL FITTINGS)	2	1	110	52						126			85	194	151		721
36	6" SDR-26 PVC PIPE SANITARY SEWER SERVICE (INCL FITTINGS)	60	185	422	543	343	300	192	192	52	338	356	165	167	482	111		3908
37	8"x8"x6" PVC SERVICE TEE		7	23	30	21	15	11	13	3	19	16	13	12	22	2		207
38	10"x10"x6" PVC SERVICE TEE	5	2								1		3	8				19
39	8"x8"x6" DUCTILE IRON SERVICE TEE							2		1								3
	WATER PIPE ITEMS																	
40	2" & UNDER 150 PSI PVC WATER PIPE FOR CONNECTIONS (OPEN CUT)																	
41	6" CLASS 350 DUCTILE IRON WATER PIPE (OPEN CUT)			431				743	2879	1482	1143	60	667	118	82	279		7884
42	8" CLASS 350 DUCTILE IRON WATER PIPE (OPEN CUT)			1328	80		1616	835		31	431	537	318	104	14	60		5354
43	8" 200 PSI, DR9, HDPE (DIRECTIONAL BORE) (INCL ADAPTER FITTINGS)										1040			160				1200
44	10" 200 PSI, DR9, HDPE (DIRECTIONAL BORE) (INCL ADAPTER FITTINGS)												200					200
45	TRACER WIRE SYSTEM FOR WATER			1779			1636	1800	3223.5	1644	2726	668	1540	726	1856	1658	176	19432.5

Monthly Totals

	DESCRIPTION	1 Estimated Quantity Installed	2 Estimated Quantity Installed	3 Estimated Quantity Installed	4 Estimated Quantity Installed	5 Estimated Quantity Installed	6 Estimated Quantity Installed	7 Estimated Quantity Installed	8 Estimated Quantity Installed	9 Estimated Quantity Installed	10 Estimated Quantity Installed	11 Estimated Quantity Installed	12 Estimated Quantity Installed	13 Estimated Quantity Installed	14 Estimated Quantity Installed	15 Estimated Quantity Installed	16 Estimated Quantity Installed	TOTAL Estimated Quantity Installed
	WATER CONNECTION ITEMS																	
46	CUT AND CAP EXISTING WATER LINE IN PLACE																2	2
47	CONNECTION: PROPOSED 6" TO EXISTING 2" (STRAIGHT-REDUCER AND COUPLING)																	
48	CONNECTION: PROPOSED 6" TO EXISTING 6" (STRAIGHT-COUPLING)															2		2
49	CONNECTION: PROPOSED 6" TO EXISTING 6" (TEE & OTHER FITTINGS)							2										2
50	CONNECTION: PROPOSED 6" TO EXISTING 6" (HOT TAP w/ VALVE ASSEMBLY)								1		2	2	2		3	2		12
51	CONNECTION: PROPOSED 6" TO EXISTING 12" (HOT TAP w/ VALVE ASSEMBLY)													1		1		2
52	CONNECTION: PROPOSED 6" TO PROPOSED 6" (TEE & OTHER FITTINGS)								1									1
53	CONNECTION: PROPOSED 8" TO EXISTING 6" (TEE & OTHER FITTINGS)						7											7
54	CONNECTION: PROPOSED 8" TO EXISTING 6" (HOT TAP w/ VALVE ASSEMBLY)															2		2
55	CONNECTION: PROPOSED 8" TO EXISTING 8" (HOT TAP w/ VALVE ASSEMBLY)						1											1
56	CONNECTION: PROPOSED 8" TO EXISTING 12" (HOT TAP w/ VALVE ASSEMBLY)						2							1	1			4
57	CONNECTION: PROPOSED 8" TO PROPOSED 6" (TEE & OTHER FITTINGS)			3				1		1	1							6
58	CONNECTION: PROPOSED 8" TO PROPOSED 8" (TEE & OTHER FITTINGS)			1			1				1							3
	WATER VALVE ITEMS																	
59	6" GATE VALVE			3			7	3	3	3	3			2				24
60	8" GATE VALVE			8			7	2		2	2			1				22
	WATER FIRE PROTECTION ITEMS																	
61	3 WAY FIRE HYDRANT w/ APPURTENANCES (INCL TEE, VALVE, HYDRANT, BRASS TAG, PIPE, & OTHER FITTINGS)			2			2	3	4	2	3	1		3		2		22
62	REMOVAL OF EXISTING FIRE HYDRANT																	
	WATER SERVICE ITEMS																	
63	SERVICE TAP (3/4") (INCL, TAPPING SADDLE, CORP STOP, ETC.)						1	16	22	9	6	6	13	11	44	41	7	176
64	SERVICE TAP (1") (INCL, TAPPING SADDLE, CORP STOP, ETC.)								6	2	3					3		14
65	SERVICE TUBING (OPEN CUT) (3/4")							192	252.5	85	55	61	41	45	12	29	56	828.5
66	SERVICE TUBING (OPEN CUT) (1")								52	26	27							105

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
67	SERVICE TUBING (BORED) (3/4")						10						314	269	1748	1446	120	3907
68	SERVICE TUBING (BORED) (1")															124		124
69	WATER SERVICE METER (3/4")																13	13
70	WATER SERVICE METER (1")																	
	MISCELLANEOUS CONSTRUCTION ITEMS																	
71	CRUSHED AGGREGATE (SIZE B25)	68.35	583.34	631.67	373.08	399.2	784.08	673.23	431.96	647	699.38	555.21	425.27	468.8	611.52	218.61	99.18	7669.88
72	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	688	2108	2977	1514	1886	1840	780	928	414	2913	1204	1164	2554	1766	215	150	23101
73	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)					8						314.8	94.5	270.3			103	790.6
74	HARDY STREET ROADWAY REPAIR (SPECIAL CONSTRUCTION)								20.1									20.1
75	9.5 MM HOT MIX ASPHALT																557.9	557.9
76	19 MM HOT MIX ASPHALT																	
77	CONCRETE SIDEWALK REPAIR (ALL DEPTHS)					16						49.6	10.6	10.6			85.9	172.7
78	CONCRETE CURB & GUTTER (MATCH EXISTING TYPE)					5						152	37.5	4.5			148.5	347.5
79	CONCRETE DITCH REPAIR																	
80	CLASS "B" CONCRETE, MINOR STRUCTURES								1.71	0.88	1.58							4.17
81	REINFORCING STEEL								111	42								153
82	INLET GRATINGS									127								127
83	INLET CASTINGS																	
84	12" CORRUGATED HDPE PIPE (DUAL WALL)								20	125	56	136		16	92		40	485
85	15" CORRUGATED HDPE PIPE (DUAL WALL)												20					20
86	12" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)																	
87	15" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)					24	32			32	48					26	24	186
88	18" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)								19	120							64	203
89	18"x11" REINFORCED CONCRETE ARCH PIPE (CLASS 3) (PLASTIC GASKETS)										88							88
90	REMOVAL OF EXISTING PIPE CROSS DRAINS (ALL SIZES AND DEPTHS)					24	32		19	128	224	136	20			26	88	697

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
91	REMOVAL OF EXISTING CORRUGATED HDPE PIPE (ALL SIZES AND DEPTHS) AND RESET								20	149				16			40	225
92	REMOVE, SALVAGE, AND RESET EXISTING WOOD FENCE								20									20
93	REMOVE, SALVAGE, AND RESET EXISTING NET WIRE FENCE																	
94	REMOVE, SALVAGE, AND RESET EXISTING CHAIN LINK FENCE																	
95	6" YELLOW THERMOPLASTIC DETAIL TRAFFIC STRIPE																	
96	LEGEND WHITE THERMOPLASTIC TRAFFIC MARKING (6" EQUIVALENT)																	
97	SOLID SOD (INCL SOD, TOP SOIL, FERTILIZER, WATERING, ETC.)																	
98	LANDSCAPE RESTORATION (INCL TOP SOIL, PLANTS, MULCH, WATERING, ETC.)																	
99	CLEARING AND GRUBBING			0.32	0.1	0.1	0.1	0.1	0.1	0.1								0.92
100	TEMPORARY EROSION CONTROL			0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1							0.9
101	MAINTENANCE OF TRAFFIC	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1								0.9
102	MOBILIZATION	0.5			0.5													1
CO1	8" DR 17 POLY BORE											663						663
CO1	12" SDR 26 PVC SEWER PIPE 8-10											14						14
CO1	48" PRECAST DOGHOUSE MANHOLE 8-10																	
CO1	RCP CLASS III 24"																	

Stored Material Summary

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8					Application Number:		16		
Application Period:		11/1/2019 TO 11/30/2019					Application Date:		11-Dec-19		
A	B	C			D		E		F		G
Pay Item No.	Unit Price	Materials Description	Stored Previously		Stored this Month		Incorporated in Work		Materials Remaining in Storage (\$)(D + E - F)		
			Quantity	Amount (\$)	Quantity	Amount (\$)	Quantity	Amount (\$)			
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	\$ \$	CAMP STREET AREA SEWER PIPE ITEMS									
		8" SDR-26 PVC SEWER PIPE (0-6')	-	\$ -	2,109	\$ 9,448.32	2,172	\$ 9,731.37	\$ -		
		8" SDR-26 PVC SEWER PIPE (6'-8')	-	\$ -	5,576	\$ 24,980.48	6,026	\$ 26,998.68	\$ -		
		8" SDR-26 PVC SEWER PIPE (8'-10')	-	\$ -	2,961	\$ 13,265.28	3,194	\$ 14,307.10	\$ -		
		8" SDR-26 PVC SEWER PIPE (10'-12')	-	\$ -	863	\$ 3,866.24	789	\$ 3,533.73	\$ -		
		8" SDR-26 PVC SEWER PIPE (12'-14')	-	\$ -	249	\$ 1,115.52	106	\$ 474.88	\$ -		
		10" SDR-26 PVC SEWER PIPE (0-6')	-	\$ -	25	\$ 176.00	48	\$ 337.92	\$ -		
		10" SDR-26 PVC SEWER PIPE (6'-8')	-	\$ -	351	\$ 2,471.04	451	\$ 3,175.04	\$ -		
		10" SDR-26 PVC SEWER PIPE (8'-10')	-	\$ -	325	\$ 2,288.00	334	\$ 2,353.40	\$ -		
		10" SDR-26 PVC SEWER PIPE (10'-12')	-	\$ -	239	\$ 1,682.56	325	\$ 2,285.96	\$ -		
		10" SDR-26 PVC SEWER PIPE (12'-14')	-	\$ -	130	\$ 915.20	101	\$ 711.04	\$ -		
		10" SDR-26 PVC SEWER PIPE (14'-16')	-	\$ -	8	\$ 56.32	76	\$ 535.04	\$ -		
		8" DUCTILE IRON SEWER PIPE (0-6')	-	\$ -	384	\$ 10,798.08	412	\$ 11,585.44	\$ -		
		8" DUCTILE IRON SEWER PIPE (6'-8')	-	\$ -	20	\$ 562.40	38	\$ 1,068.56	\$ -		
		10" DUCTILE IRON SEWER PIPE (0-6')	-	\$ -	25	\$ 953.00		\$ -	\$ -		
		10" DUCTILE IRON SEWER PIPE (6'-8')	-	\$ -	30	\$ 1,143.60		\$ -	\$ -		
		REMOVAL OF EXISTING SEWER LINE	-	\$ -		\$ -	12,382	\$ -	\$ -		
		ABANDONMENT OF EXISTING SEWER LINE (ALL SIZES)	-	\$ -		\$ -		\$ -	\$ -		
		TRACER WIRE SYSTEM FOR SEWER	-	\$ -	19,153	\$ 21,834.42	18,860	\$ 21,500.24	\$ -		
		SEWER MANHOLE ITEMS									
		48" PRECAST CONCRETE SEWER MANHOLE (0-6)	-	\$ -	6	\$ 5,261.94	18	\$ 15,785.82	\$ -		
48" PRECAST CONCRETE SEWER MANHOLE (6-8)	-	\$ -	32	\$ 32,576.64	32	\$ 32,576.64	\$ -				
48" PRECAST CONCRETE SEWER MANHOLE (8-10)	-	\$ -	8	\$ 9,528.00	9	\$ 10,719.00	\$ -				
48" PRECAST CONCRETE SEWER MANHOLE (10-12)	-	\$ -	1	\$ 1,346.00	1	\$ 1,346.00	\$ -				
		TOTALS		\$ -		\$ 144,269.04		\$ 159,025.86			
		10/2/2018									

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Stored Material Summary

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8				Application Number: 16				
Application Period:		11/1/2019 TO 11/30/2019				Application Date: 11-Dec-19				
A	B	C		D		E		F		G
Pay Item No.	Unit Price	Materials Description	Stored Previously		Stored this Month		Incorporated in Work		Materials Remaining in Storage (\$) (D + E - F)	
			Quantity	Amount (\$)	Quantity	Amount (\$)	Quantity	Amount (\$)		
		Subtotal From Previous Page					144269.04		159025.8604	
23	\$ 1,412.67	48" PRECAST CONCRETE SEWER MANHOLE (12-14)		-	\$ -	3	\$ 4,238.01	2.00	\$ 2,825.34	\$ -
24	\$ 929.33	48" PRECAST CONCRETE SEWER MANHOLE (0-6) (FLAT TOP)		-	\$ -	3	\$ 2,787.99	1.00	\$ 929.33	\$ -
25	\$ 1,552.52	60" PRECAST CONCRETE SEWER MANHOLE (0-6)		-	\$ -	1	\$ 1,552.52		\$ -	\$ -
26	\$ 1,550.00	60" PRECAST CONCRETE SEWER MANHOLE (6-8)		-	\$ -	1	\$ 1,550.00	1.00	\$ 1,550.00	\$ -
27	\$ 1,850.00	60" PRECAST CONCRETE SEWER MANHOLE (8-10)		-	\$ -	1	\$ 1,850.00	1.00	\$ 1,850.00	\$ -
28	\$ 2,156.00	60" PRECAST CONCRETE SEWER MANHOLE (10-12)		-	\$ -	1	\$ 2,156.00	1.00	\$ 2,156.00	\$ -
29	\$ 575.00	60" PRECAST CONCRETE SEWER MANHOLE (6-8) (DOGHOUSE)		-	\$ -	2	\$ 1,150.00		\$ -	\$ -
30	\$ 2,665.00	72" PRECAST CONCRETE SPLITTER SEWER MANHOLE (10-12) (DOGHOUSE)		-	\$ -	1	\$ 2,665.00		\$ -	\$ -
31		DEMOLITION AND REMOVAL OF EXISTING MANHOLES (ALL TYPES)		-	\$ -		\$ -	45.00	\$ -	\$ -
32		ABANDONMENT OF EXISTING MANHOLE		-	\$ -		\$ -	3.00	\$ -	\$ -
33	\$ 649.28	DROP MANHOLE ASSEMBLY (ALL DEPTHS)		-	\$ -	1	\$ 649.28		\$ -	\$ -
SEWER SERVICE ITEMS										
34	\$ 170.25	4" SANITARY SEWER SERVICE CLEANOUT		-	\$ -	220	\$ 37,455.00	228.00	\$ 38,817.00	\$ -
35		4" SDR-26 PVC PIPE SANITARY SEWER SERVICE (INCL FITTINGS)		-	\$ -		\$ -	721.00	\$ -	\$ -
36	\$ 2.34	6" SDR-26 PVC PIPE SANITARY SEWER SERVICE (INCL FITTINGS)		-	\$ -	3,792	\$ 8,873.28	3,908.00	\$ 9,144.72	\$ -
37	\$ 58.40	8"x8"x6" PVC SERVICE TEE		-	\$ -	203	\$ 11,855.20	207.00	\$ 12,088.80	\$ -
38	\$ 220.22	10"x10"x6" PVC SERVICE TEE		-	\$ -	20	\$ 4,404.40	19.00	\$ 4,184.18	\$ -
39	\$ 480.00	8"x8"x6" DUCTILE IRON SERVICE TEE		-	\$ -	5	\$ 2,400.00	3.00	\$ 1,440.00	\$ -
WATER PIPE ITEMS										
40	\$ 1.06	2" & UNDER 150 PSI PVC WATER PIPE FOR CONNECTIONS (OPEN CUT)		-	\$ -	40	\$ 42.40		\$ -	\$ 42.40
41	\$ 16.58	6" CLASS 350 DUCTILE IRON WATER PIPE (OPEN CUT)		-	\$ -	5,344	\$ 88,603.52	7,884.00	\$ 130,716.72	\$ -
42	\$ 17.23	8" CLASS 350 DUCTILE IRON WATER PIPE (OPEN CUT)		-	\$ -	4,680	\$ 80,636.40	5,354.00	\$ 92,249.42	\$ -
43	\$ 18.51	8" 200 PSI, DR9, HDPE (DIRECTIONAL BORE) (INCL ADAPTER FITTINGS)		-	\$ -	500	\$ 9,255.00	1,200.00	\$ 22,212.00	\$ -
44	\$ 25.77	10" 200 PSI, DR9, HDPE (DIRECTIONAL BORE) (INCL ADAPTER FITTINGS)		-	\$ -	360	\$ 9,277.20	200.00	\$ 5,154.00	\$ -
45	\$ 1.00	TRACER WIRE SYSTEM FOR WATER		-	\$ -	22,864	\$ 22,864.00	19,432.50	\$ 19,432.50	\$ 3,431.50
		TOTALS			\$ -		\$ 438,534.24		\$ 503,775.87	\$ 3,473.90

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Stored Material Summary

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8					Application Number:		16		
Application Period:		11/1/2019 TO 11/30/2019					Application Date:		11-Dec-19		
A	B	C			D		E		F		G
Pay Item No.	Unit Price	Materials Description	Stored Previously		Stored this Month		Incorporated In Work		Materials Remaining in Storage (\$ (D + E - F))		
			Quantity	Amount (\$)	Quantity	Amount (\$)	Quantity	Amount (\$)			
		Subtotal From Previous Page				438534.24		503775.8704	3473.9		
		WATER CONNECTION ITEMS									
46	\$ 116.50	CUT AND CAP EXISTING WATER LINE IN PLACE	-	\$ -	6	\$ 699.00	2.00	\$ 233.00	\$ 466.00		
47	\$ 222.00	CONNECTION: PROPOSED 6" TO EXISTING 2" (STRAIGHT-REDUCER AND COUPLING)	-	\$ -	1	\$ 222.00		\$ -	\$ 222.00		
48	\$ 239.00	CONNECTION: PROPOSED 6" TO EXISTING 6" (STRAIGHT-COUPLING)	-	\$ -	2	\$ 478.00	2.00	\$ 478.00	\$ -		
49	\$ 654.00	CONNECTION: PROPOSED 6" TO EXISTING 6" (TEE & OTHER FITTINGS)	-	\$ -	3	\$ 1,962.00	2.00	\$ 1,308.00	\$ -		
50	\$ 1,344.00	CONNECTION: PROPOSED 6" TO EXISTING 6" (HOT TAP w/ VALVE ASSEMBLY)	-	\$ -	8	\$ 10,752.00	12.00	\$ 16,128.00	\$ -		
51	\$ 2,959.00	CONNECTION: PROPOSED 6" TO EXISTING 12" (HOT TAP w/ VALVE ASSEMBLY)	-	\$ -	2	\$ 5,918.00	2.00	\$ 5,918.00	\$ -		
52	\$ 654.00	CONNECTION: PROPOSED 6" TO PROPOSED 6" (TEE & OTHER FITTINGS)	-	\$ -	1	\$ 654.00	1.00	\$ 654.00	\$ -		
53	\$ 916.00	CONNECTION: PROPOSED 8" TO EXISTING 6" (TEE & OTHER FITTINGS)	-	\$ -	11	\$ 10,076.00	7.00	\$ 6,412.00	\$ -		
54	\$ 2,006.00	CONNECTION: PROPOSED 8" TO EXISTING 6" (HOT TAP w/ VALVE ASSEMBLY)	-	\$ -	1	\$ 2,006.00	2.00	\$ 4,012.00	\$ -		
55	\$ 2,532.00	CONNECTION: PROPOSED 8" TO EXISTING 8" (HOT TAP w/ VALVE ASSEMBLY)	-	\$ -	1	\$ 2,532.00	1.00	\$ 2,532.00	\$ -		
56	\$ 3,782.90	CONNECTION: PROPOSED 8" TO EXISTING 12" (HOT TAP w/ VALVE ASSEMBLY)	-	\$ -	3	\$ 11,348.70	4.00	\$ 15,131.60	\$ -		
57	\$ 355.00	CONNECTION: PROPOSED 8" TO PROPOSED 6" (TEE & OTHER FITTINGS)	-	\$ -	5	\$ 1,775.00	6.00	\$ 2,130.00	\$ -		
58	\$ 550.00	CONNECTION: PROPOSED 8" TO PROPOSED 8" (TEE & OTHER FITTINGS)	-	\$ -	3	\$ 1,650.00	3.00	\$ 1,650.00	\$ -		
		WATER VALVE ITEMS									
59	\$ 569.00	6" GATE VALVE	-	\$ -	27	\$ 15,363.00	24.00	\$ 13,656.00	\$ 1,707.00		
60	\$ 810.00	8" GATE VALVE	-	\$ -	22	\$ 17,820.00	22.00	\$ 17,820.00	\$ -		
		WATER FIRE PROTECTION ITEMS									
61	\$ 1,237.08	3 WAY FIRE HYDRANT w/ APPURTENANCES (INCL TEE, VALVE, HYDRANT, BRASS TAG, PIPE, & OTH	-	\$ -	16	\$ 19,793.28	22.00	\$ 27,215.76	\$ -		
62		REMOVAL OF EXISTING FIRE HYDRANT	-	\$ -		\$ -		\$ -	\$ -		
		WATER SERVICE ITEMS									
63	\$ 70.50	SERIVCE TAP (3/4") (INCL, TAPPING SADDLE, CORP STOP, ETC.)	-	\$ -	110	\$ 7,755.00	176.00	\$ 12,408.00	\$ -		
64	\$ 73.98	SERIVCE TAP (1") (INCL, TAPPING SADDLE, CORP STOP, ETC.)	-	\$ -	29	\$ 2,145.42	14.00	\$ 1,035.72	\$ 1,109.70		
65		SERVICE TUBING (OPEN CUT) (3/4")	-	\$ -		\$ -	828.50	\$ -	\$ -		
66		SERVICE TUBING (OPEN CUT) (1")	-	\$ -		\$ -	105.00	\$ -	\$ -		
		TOTALS		\$ -		\$ 551,483.64		\$ 632,497.95	\$ 6,978.60		

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Stored Material Summary

Contractor's Application

For (contract):		COMPREHENSIVE SEWER/WATER PHASE 8				Application Number:		16	
Application Period:		11/1/2019 TO 11/30/2019				Application Date:		11-Dec-19	
A	B	C	D		E		F		G
Pay Item No.	Unit Price	Materials Description	Stored Previously		Stored this Month		Incorporated in Work		Materials Remaining in Storage (\$ (D + E - F))
			Quantity	Amount (\$)	Quantity	Amount (\$)	Quantity	Amount (\$)	
		Subtotal From Previous Page				551483.64		632497.9504	6978.6
67		SERVICE TUBING (BORED) (3/4")	-	\$ -		\$ -	3,907.00	\$ -	\$ -
68		SERVICE TUBING (BORED) (1")	-	\$ -		\$ -	124.00	\$ -	\$ -
69		WATER SERVICE METER (3/4")	-	\$ -		\$ -	13.00	\$ -	\$ -
70		WATER SERVICE METER (1")	-	\$ -		\$ -		\$ -	\$ -
		MISCELLANEOUS CONSTRUCTION ITEMS							
71		CRUSHED AGGREGATE (SIZE 825)	-	\$ -		\$ -	7,669.88	\$ -	\$ -
72		SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	-	\$ -		\$ -	23,101.00	\$ -	\$ -
73		CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	-	\$ -		\$ -	790.60	\$ -	\$ -
74		HARDY STREET ROADWAY REPAIR (SPECIAL CONSTRUCTION)	-	\$ -		\$ -	20.10	\$ -	\$ -
75		9.5 MM HOT MIX ASPHALT	-	\$ -		\$ -	557.90	\$ -	\$ -
76		19 MM HOT MIX ASPHALT	-	\$ -		\$ -		\$ -	\$ -
77		CONCRETE SIDEWALK REPAIR (ALL DEPTHS)	-	\$ -		\$ -	172.70	\$ -	\$ -
78		CONCRETE CURB & GUTTER (MATCH EXISTING TYPE)	-	\$ -		\$ -	347.50	\$ -	\$ -
79		CONCRETE DITCH REPAIR	-	\$ -		\$ -		\$ -	\$ -
80		CLASS "B" CONCRETE, MINOR STRUCTURES	-	\$ -		\$ -	4.17	\$ -	\$ -
81		REINFORCING STEEL	-	\$ -		\$ -	153.00	\$ -	\$ -
82		INLET GRATINGS	-	\$ -		\$ -	127.00	\$ -	\$ -
83		INLET CASTINGS	-	\$ -		\$ -		\$ -	\$ -
84		12" CORRUGATED HDPE PIPE (DUAL WALL)	-	\$ -		\$ -	485.00	\$ -	\$ -
85		15" CORRUGATED HDPE PIPE (DUAL WALL)	-	\$ -		\$ -	20.00	\$ -	\$ -
86		12" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)	-	\$ -		\$ -		\$ -	\$ -
87		15" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)	-	\$ -		\$ -	186.00	\$ -	\$ -
88		18" REINFORCED CONCRETE PIPE (CLASS 3) (RUBBER GASKETS)	-	\$ -		\$ -	203.00	\$ -	\$ -
89		18"x11" REINFORCED CONCRETE ARCH PIPE (CLASS 3) (PLASTIC GASKETS)	-	\$ -		\$ -	88.00	\$ -	\$ -
90		REMOVAL OF EXISTING PIPE CROSS DRAINS (ALL SIZES AND DEPTHS)	-	\$ -		\$ -	697.00	\$ -	\$ -
		TOTALS		\$ -		\$ 551,483.64		\$ 632,497.95	\$ 6,978.60

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Stored Material Summary

Contractor's Application

[illegible]

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Contractor's Application For Payment No. 11

Application Period: Beginning: 11/1/2018 Ending: 11/31/2018		Application Date: 4-Dec-19
To (Owner): CITY OF HATTIESBURG	From (Contractor): C.B. DEVELOPERS, INC.	Via (Engineer): SHOWS, DEARMAN & WAITS, INC.
Project: COMPRENHENSIVE SEWER PHASE 5	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS	\$ -	\$ -
NET CHANGE BY CHANGE ORDERS	\$ -	

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: Date: **12/4/2019**

1. ORIGINAL CONTRACT PRICE	\$ 1,077,240.50
2. Net change by Change Orders	\$ -
3. CURRENT CONTRACT PRICE (LINE 1 + 2)	\$ 1,077,240.50
4. TOTAL COMPLETED AND STORED TO DATE (Column F on Progress Estimates)	\$ 1,166,900.62
5. RETAINAGE:	
a. 5.0 % x Work Completed	\$ 58,345.03
b. 5.0% x Stored Material	\$ -
c. Total Retainage (line 5a + line 5b)	\$ 58,345.03
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c)	\$ 1,108,555.59
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	\$ 1,039,034.97
8. AMOUNT DUE THIS APPLICATION	\$ 69,520.62
9. BALANCE TO FINISH, PLUS RETAINAGE	
(Column G on Progress Estimate + Line 5 above)	\$ (31,315.09)

Payment of:

\$69,520.62

(Line 8 or other - attach explanation of other amount)

Is recommended by:

(Engineer)

12-16-19

(Date)

Payment of:

\$69,520.62

(Line 8 or other - attach explanation of other amount)

Is approved by:

(Owner)

(Date)

Is approved by:

(Owner)

(Date)

Approved by:

(Funding Agency, if applicable)

(Date)

093695.7220.54
MB 2017-403

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):		COMPREHENSIVE SEWER PHASE 5				Application Number: 43803				
Application Period:		11/1/2018 TO 11/31/2018				Application Date: 4-Dec-19				
	A	Bid	Quantity	Unit Price	B	C	D	E	F	G
Pay Item	Item Description				Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	Balance to Finish (B - F)
	SITE 1-DOGWOOD DRIVE									
1	4" 160 PSI PVC SANITARY SEWER FORCE MAIN (ALL DEPTHS)	1000.0	\$	7.84	\$ 7,840.00	982	\$ 7,698.88	\$0.00	\$ 7,698.88	\$ 141.12
2	8" SDR 26 PVC SEWER PIPE (0'-6')	1098.0	\$	24.16	\$ 26,527.68	966	\$ 23,338.56	\$0.00	\$ 23,338.56	\$ 3,189.12
3	8" SDR 26 PVC SEWER PIPE (6'-8')	601.0	\$	26.56	\$ 15,962.56	707	\$ 18,777.92	\$0.00	\$ 18,777.92	\$ (2,815.36)
4	8" SDR 26 PVC SEWER PIPE (8'-10')	123.0	\$	38.55	\$ 4,741.65	146	\$ 5,628.30	\$0.00	\$ 5,628.30	\$ (886.65)
5	8" SDR 26 PVC SEWER PIPE (10'-12')	101.0	\$	43.34	\$ 4,377.34	48	\$ 2,080.32	\$0.00	\$ 2,080.32	\$ 2,297.02
6	8" SDR 26 PVC SEWER PIPE (12'-14')	135.0	\$	48.14	\$ 6,498.90	55	\$ 2,647.70	\$0.00	\$ 2,647.70	\$ 3,851.20
7	AIR RELEASE AND VACUUM VALVE ASSEMBLY (INCLUDING PR	1.0	\$	4,189.24	\$ 4,189.24	1	\$ 4,189.24	\$0.00	\$ 4,189.24	\$ -
	MANHOLE ITEMS									
8	48" PRECAST CONCRETE SEWER MANHOLE (0'-6')	3.0	\$	2,689.82	\$ 8,069.46	2	\$ 5,379.64	\$0.00	\$ 5,379.64	\$ 2,689.82
9	48" PRECAST CONCRETE SEWER MANHOLE (6'-8')	8.0	\$	3,176.78	\$ 25,414.24	7	\$ 22,237.46	\$0.00	\$ 22,237.46	\$ 3,176.78
10	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')	1.0	\$	3,658.87	\$ 3,658.87	1	\$ 3,658.87	\$0.00	\$ 3,658.87	\$ -
11	48" PRECAST CONCRETE SEWER MANHOLE (10'-12')	1.0	\$	4,190.30	\$ 4,190.30	-	\$ -	\$0.00	\$ -	\$ 4,190.30
12	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')	1.0	\$	4,382.73	\$ 4,382.73	1	\$ 4,382.73	\$0.00	\$ 4,382.73	\$ -
	SEWER SERVICE ITEMS									
13	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)	942.0	\$	10.60	\$ 9,985.20	898	\$ 9,518.80	\$0.00	\$ 9,518.80	\$ 466.40
14	8" X 8" X 6" PVC TEE	8.0	\$	323.75	\$ 2,590.00	9	\$ 2,913.75	\$0.00	\$ 2,913.75	\$ (323.75)
15	6" PVC CLEANOUT	8.0	\$	359.74	\$ 2,877.92	15	\$ 5,396.10	\$0.00	\$ 5,396.10	\$ (2,518.18)
	LIFT STATION ITEMS									
16	LIFT STATION INCL CLEARING AND GRUBBING, BORROW MAT	1.0	\$	207,236.80	\$ 207,236.80	1	\$ 207,236.80	\$0.00	\$ 207,236.80	\$ -
	MISCELLANEOUS CONSTRUCTION ITEMS									
17	ABANDONMENT OF SEPTIC TANKS	7.0	\$	359.68	\$ 2,517.76	9	\$ 3,237.12	\$0.00	\$ 3,237.12	\$ (719.36)
18	DROP MANHOLE ASSEMBLY (ALL DEPTHS)	3.0	\$	869.23	\$ 2,607.69	3	\$ 2,607.69	\$0.00	\$ 2,607.69	\$ -
19	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTING	4.0	\$	599.95	\$ 2,399.80	-	\$ -	\$0.00	\$ -	\$ 2,399.80
20	CRUSHED AGGREGATE (SIZE 825)	612.0	\$	44.96	\$ 27,515.52	887	\$ 39,892.11	\$0.00	\$ 39,892.11	\$ (12,376.59)
	TOTALS				\$ 378,583.66		\$ 370,821.99	\$0.00	\$ 370,821.99	\$ 2,761.67

EJCDC No. C-620 (2002 Edition)

12/4/2019

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):					Application Number:						
COMPREHENSIVE SEWER PHASE 5					43803						
Application Period:					Application Date:						
11/1/2018 TO 11/31/2018					4-Dec-19						
	A	Bid	Quantity	Unit Price	B	C	D	E	F		G
Pay Item	Item Description				Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (B - F)
	Subtotal from Previous Page				\$ 373,583.66		\$ 370,821.99	\$0.00	\$ 370,821.99		\$ 2,761.67
21	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	2495.0	\$	10.79	\$ 26,921.05	128	\$ 1,381.12	\$0.00	\$ 1,381.12	5%	\$ 25,539.93
22	HOT MIX ASPHALT, ST, 9.5MM	208.0	\$	167.85	\$ 34,912.80	388	\$ 65,147.62	\$0.00	\$ 65,147.62	187%	\$ (30,234.82)
23	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	57.0	\$	59.95	\$ 3,417.15	40	\$ 2,404.59	\$0.00	\$ 2,404.59	70%	\$ 1,012.56
24	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)	16.0	\$	11.99	\$ 191.84	72	\$ 863.28	\$0.00	\$ 863.28	450%	\$ (671.44)
25	30" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	16.0	\$	95.92	\$ 1,534.72	-	\$ -	\$0.00	\$ -	0%	\$ 1,534.72
26	CLASS "B" CONCRETE, MINOR STRUCTURES	5.0	\$	2,353.82	\$ 11,769.10	6	\$ 12,946.01	\$0.00	\$ 12,946.01	110%	\$ (1,176.91)
27	GRASSING	1.0	\$	3,896.56	\$ 3,896.56	1	\$ 1,948.28	\$0.00	\$ 1,948.28	50%	\$ 1,948.28
28	EROSION CONTROL	1.0	\$	6,594.17	\$ 6,594.17	1	\$ 4,945.63	\$0.00	\$ 4,945.63	75%	\$ 1,648.54
29	MOBILIZATION	1.0	\$	44,960.26	\$ 44,960.26	1	\$ 44,960.26	\$0.00	\$ 44,960.26	100%	\$ -
30	MAINTENANCE OF TRAFFIC	1.0	\$	29,973.50	\$ 29,973.50	1	\$ 29,973.50	\$0.00	\$ 29,973.50	100%	\$ -
	SITE 2-CORRINE STREET, EMERALD LANE & DUKE AVENUE										
1	8" SDR 26 PVC SEWER PIPE (6'-8')	243.0	\$	24.46	\$ 5,943.78	448	\$ 10,958.08	\$0.00	\$ 10,958.08	184%	\$ (5,014.30)
2	8" SDR 26 PVC SEWER PIPE (8'-10')	635.0	\$	26.56	\$ 16,865.60	865	\$ 22,974.40	\$0.00	\$ 22,974.40	136%	\$ (6,108.80)
3	8" SDR 26 PVC SEWER PIPE (10'-12')	125.0	\$	28.95	\$ 3,618.75	115	\$ 3,329.25	\$0.00	\$ 3,329.25	92%	\$ 289.50
4	8" SDR 26 PVC SEWER PIPE (12'-14')	137.0	\$	31.35	\$ 4,294.95	145	\$ 4,545.75	\$0.00	\$ 4,545.75	106%	\$ (250.80)
5	8" SDR 26 PVC SEWER PIPE (14'-16')	102.0	\$	36.15	\$ 3,687.30	102	\$ 3,687.30	\$0.00	\$ 3,687.30	100%	\$ -
6	8" SDR 26 PVC SEWER PIPE (16'-18')	187.0	\$	40.94	\$ 7,655.78	327	\$ 13,387.38	\$0.00	\$ 13,387.38	175%	\$ (5,731.60)
7	8" SDR 11 HDPE SEWER SERVICE BORE	275.0	\$	59.47	\$ 16,354.25	268	\$ 15,937.96	\$0.00	\$ 15,937.96	97%	\$ 416.29
8	15" SDR 26 PVC SEWER PIPE (6'-8')	733.0	\$	38.50	\$ 28,220.50	647	\$ 24,909.50	\$0.00	\$ 24,909.50	88%	\$ 3,311.00
9	15" SDR 26 PVC SEWER PIPE (8'-10')	336.0	\$	43.29	\$ 14,545.44	315	\$ 13,636.35	\$0.00	\$ 13,636.35	94%	\$ 909.09
10	15" SDR 26 PVC SEWER PIPE (10'-12')	225.0	\$	48.09	\$ 10,820.25	266	\$ 12,791.94	\$0.00	\$ 12,791.94	118%	\$ (1,971.69)
11	24" STEEL CASING (BORED)	60.0	\$	213.46	\$ 12,807.60	30	\$ 6,403.80	\$0.00	\$ 6,403.80	50%	\$ 6,403.80
	MANHOLE ITEMS										
12	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')	3.0	\$	3,179.29	\$ 9,537.87	4	\$ 12,717.16	\$0.00	\$ 12,717.16	133%	\$ (3,179.29)
13	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')	1.0	\$	3,663.36	\$ 3,663.36	1	\$ 3,663.36	\$0.00	\$ 3,663.36	100%	\$ -
	TOTALS				\$ 675,770.24		\$ 684,334.51	\$0.00	\$ 684,334.51		\$ (8,564.27)

EJCDC No. C-620 (2002 Edition)

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):				Application Number: 43803						
Application Period: 11/1/2018 TO 11/31/2018				Application Date: 4-Dec-19						
Pay Item	A Item Description	Bid Quantity	Unit Price	B Bid Value	C Estimated Quantity (installed)	D Value	E Materials Stored (not in C)	F Total Completed and Stored to Date (D + E)	% (F)	G Balance to Finish (B - F)
	Subtotal from Previous Page			\$ 675,770.24		\$ 684,334.51	\$0.00	\$ 684,334.51		\$ (8,564.27)
14	48" PRECAST CONCRETE SEWER MANHOLE (14'-16')	1.0	\$ 4,675.87	\$ 4,675.87	1	\$ 4,675.87	\$0.00	\$ 4,675.87	100%	\$ -
15	60" PRECAST CONCRETE SEWER MANHOLE (6'-8')	3.0	\$ 4,615.92	\$ 13,847.76	2	\$ 9,231.84	\$0.00	\$ 9,231.84	67%	\$ 4,615.92
16	60" PRECAST CONCRETE SEWER MANHOLE (10'-12')	2.0	\$ 4,991.79	\$ 9,983.58	3	\$ 14,975.37	\$0.00	\$ 14,975.37	150%	\$ (4,991.79)
17	DROP MANHOLE ASSEMBLY (ALL DEPTHS)	3.0	\$ 869.23	\$ 2,607.69	1	\$ 869.23	\$0.00	\$ 869.23	33%	\$ 1,738.46
18	DEMOLITION AND REMOVAL OF EXISTING SEWER MANHOLE SEWER SERVICE ITEMS	8.0	\$ 1,498.68	\$ 11,989.44	8	\$ 11,989.44	\$0.00	\$ 11,989.44	100%	\$ -
19	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)	270.0	\$ 10.56	\$ 2,851.20	846	\$ 8,933.76	\$0.00	\$ 8,933.76	313%	\$ (6,082.56)
20	8" X 8" X 6" PVC TEE	3.0	\$ 323.75	\$ 971.25	15	\$ 4,856.25	\$0.00	\$ 4,856.25	500%	\$ (3,885.00)
21	SERVICE CONNECTION (INSERT A TEE)	6.0	\$ 585.08	\$ 3,510.48	17	\$ 9,946.36	\$0.00	\$ 9,946.36	283%	\$ (6,435.88)
22	6" PVC CLEANOUT MISCELLANEOUS CONSTRUCTION ITEMS	9.0	\$ 370.47	\$ 3,334.23	32	\$ 11,855.04	\$0.00	\$ 11,855.04	356%	\$ (8,520.81)
23	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTING)	8.0	\$ 669.01	\$ 5,352.08	11	\$ 7,359.11	\$0.00	\$ 7,359.11	138%	\$ (2,007.03)
24	CRUSHED AGGREGATE (SIZE 825)	1387.0	\$ 44.96	\$ 62,359.52	1,333.32	\$ 59,946.07	\$0.00	\$ 59,946.07	96%	\$ 2,413.45
25	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	8090.0	\$ 11.39	\$ 92,145.10	3,332	\$ 37,951.48	\$0.00	\$ 37,951.48	41%	\$ 54,193.62
26	HOT MIX ASPHALT, ST, 9.5MM	530.0	\$ 167.85	\$ 88,960.50	1,165	\$ 195,593.93	\$0.00	\$ 195,593.93	220%	\$ (106,633.43)
27	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	25.0	\$ 59.95	\$ 1,498.75	26	\$ 1,563.50	\$0.00	\$ 1,563.50	104%	\$ (64.75)
28	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)	180.0	\$ 11.99	\$ 2,158.20	288	\$ 3,453.12	\$0.00	\$ 3,453.12	160%	\$ (1,294.92)
29	12" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	24.0	\$ 39.57	\$ 949.68	-	\$ -	\$0.00	\$ -	0%	\$ 949.68
30	18" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	64.0	\$ 43.16	\$ 2,762.24	168	\$ 7,250.88	\$0.00	\$ 7,250.88	263%	\$ (4,488.64)
31	21" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	40.0	\$ 52.75	\$ 2,110.00	-	\$ -	\$0.00	\$ -	0%	\$ 2,110.00
32	24" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	48.0	\$ 70.74	\$ 3,395.52	120	\$ 8,488.80	\$0.00	\$ 8,488.80	250%	\$ (5,093.28)
33	CLASS "B" CONCRETE, MINOR STRUCTURES	1.0	\$ 2,381.10	\$ 2,381.10	-	\$ -	\$0.00	\$ -	0%	\$ 2,381.10
34	GRASSING	1.0	\$ 3,896.56	\$ 3,896.56	1	\$ 3,896.56	\$0.00	\$ 3,896.56	100%	\$ -
35	EROSION CONTROL	1.0	\$ 7,793.11	\$ 7,793.11	1	\$ 7,793.11	\$0.00	\$ 7,793.11	100%	\$ -
36	MOBILIZATION	1.0	\$ 41,962.90	\$ 41,962.90	1.00	\$ 41,962.90	\$0.00	\$ 41,962.90	100%	\$ -
	TOTALS			\$ 1,047,267.00		\$ 1,136,927.12	\$0.00	\$ 1,136,927.12		\$ (89,660.12)

ECDC No. C-620 (2002 Edition)

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Contractor's Application

Page 6 of 10

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
	SITE 1-DOGWOOD DRIVE												0
1	4" 160 PSI PVC SANITARY SEWER FORCE MAIN (ALL DEPTHS)						745	237					982
2	8" SDR 26 PVC SEWER PIPE (0'-6')					423	543						966
3	8" SDR 26 PVC SEWER PIPE (6'-8')					151	184	372					707
4	8" SDR 26 PVC SEWER PIPE (8'-10')					96	50						146
5	8" SDR 26 PVC SEWER PIPE (10'-12')						48						48
6	8" SDR 26 PVC SEWER PIPE (12'-14')						55						55
7	AIR RELEASE AND VACUUM VALVE ASSEMBLY (INCLUDING PRECAST CONCRETE MANHOLE)							1					1
6	MANHOLE ITEMS												0
8	48" PRECAST CONCRETE SEWER MANHOLE (0'-6')						1			1			2
9	48" PRECAST CONCRETE SEWER MANHOLE (6'-8')					3	2			2			7
10	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')					1							1
11	71929.36												0
12	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')						1						1
	SEWER SERVICE ITEMS												0
13	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)					144	369	282		103			898
14	8" X 8" X 6" PVC TEE					2	4	2		1			9
15	6" PVC CLEANOUT					3	4	3		5			15
	LIFT STATION ITEMS												0
16	LIFT STATION INCL CLEARING AND GRUBBING, BORROW MATERIAL, CRUSHED AGGREGATE, CC					0.25	0.5		0.2	0.05			1
	MISCELLANEOUS CONSTRUCTION ITEMS												0
17	ABANDONMENT OF SEPTIC TANKS									5			9
18	DROP MANHOLE ASSEMBLY (ALL DEPTHS)									3			3
19	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTINGS, CORP STOP, CURB STOP, TAPPING SADDLE, ETC.)												0
20	CRUSHED AGGREGATE (SIZE 825)					12.08		77.75	784.35		13.1		867.28

Monthly Totals

	DESCRIPTION	1 Estimated Quantity Installed	2 Estimated Quantity Installed	3 Estimated Quantity Installed	4 Estimated Quantity Installed	5 Estimated Quantity Installed	6 Estimated Quantity Installed	7 Estimated Quantity Installed	8 Estimated Quantity Installed	9 Estimated Quantity Installed	10 Estimated Quantity Installed	11 Estimated Quantity Installed	TOTAL Estimated Quantity Installed
21	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM					56					72		128
22	HOT MIX ASPHALT, 5T, 9.5MM							88.98				299.15	388.13
23	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)										40.11		40.11
24	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)								72				72
25	30" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS												0
26	CLASS "B" CONCRETE, MINOR STRUCTURES											5.5	5.5
27	GRASSING										0.5		0.5
28	EROSION CONTROL						0.5				0.25		0.75
29	MOBILIZATION					1							1
30	MAINTENANCE OF TRAFFIC					0.5	0.25		0.25				1
	SITE 2-CORRINE STREET, EMERALD LANE & DUKE AVENUE												0
1	8" SDR 26 PVC SEWER PIPE (6'-8')			28	420								448
2	8" SDR 26 PVC SEWER PIPE (8'-10')			111	754								865
3	8" SDR 26 PVC SEWER PIPE (10'-12')			115									115
4	8" SDR 26 PVC SEWER PIPE (12'-14')			145									145
5	8" SDR 26 PVC SEWER PIPE (14'-16')			77	25								102
6	8" SDR 26 PVC SEWER PIPE (16'-18')			215	112								327
7	8" SDR 11 HDPE SEWER SERVICE BORE			268									268
8	15" SDR 26 PVC SEWER PIPE (6'-8')		647										647
9	15" SDR 26 PVC SEWER PIPE (8'-10')	200	115										315
10	15" SDR 26 PVC SEWER PIPE (10'-12')	98	168										266
11	24" STEEL CASING (BORED)		30										30
	MANHOLE ITEMS												0
12	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')				4								4
13	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')			1									1

Monthly Totals

	DESCRIPTION	1 Estimated Quantity Installed	2 Estimated Quantity Installed	3 Estimated Quantity Installed	4 Estimated Quantity Installed	5 Estimated Quantity Installed	6 Estimated Quantity Installed	7 Estimated Quantity Installed	8 Estimated Quantity Installed	9 Estimated Quantity Installed	10 Estimated Quantity Installed	11 Estimated Quantity Installed	TOTAL Estimated Quantity Installed
14	48" PRECAST CONCRETE SEWER MANHOLE (14'-16')			1									1
15	60" PRECAST CONCRETE SEWER MANHOLE (6')		2										2
16	60" PRECAST CONCRETE SEW	2	1										3
17	DROP MANHOLE ASSEMBLY (ALL DEPTHS)		1										1
18	DEMOLITION AND REMOVAL OF EXISTING SEW		5		3								8
	SEWER SERVICE ITEMS												0
19	6" SDR 26 PVC SEWER PIPE FC	17	236	333	260								846
20	8" X 8" X 6" PVC TEE			10	5								15
21	SERVICE CONNECTION (INSERT)	1	16										17
22	6" PVC CLEANOUT	1	13	11	7								32
	MISCELLANEOUS CONSTRUCTION ITEMS												0
23	WATER SERVICE REPAIR (INCLUDING SERVICE		3	8									11
24	CRUSHED AGGREGATE (SIZE	111.39	538.72	451.21	232								1333.32
25	SELECT FILL MATERIAL (CLASS 9, GROUP C), LV		716	1762	854			64.05				-64.05	3332
26	HOT MIX ASPHALT, 5T, 9.5MM							725.83			375.41	64.05	1165.29
27	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)				26.08								26.08
28	REMOVAL OF CROSS DRAINS (ALL TYPES AND S		88		200								288
29	12" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS												0
30	18" REINFORCED CONCRETE P	40	48		80								168
31	21" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS												0
32	24" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS				120								120
33	CLASS "B" CONCRETE, MINOR STRUCTURES		0										0
34	GRASSING										1		1
35	EROSION CONTROL				0.5		0.5						1
36	MOBILIZATION	0.5	0.5										1

Monthly Totals

[illegible]

Contractor's Final Application For Payment No. 12Final

Application Period: Beginning: 12/1/2018 Ending: 4/30/ ²⁰¹⁹ 2018		Application Date: 4-Dec-19
To (Owner): CITY OF HATTIESBURG	From (Contractor): C.B. DEVELOPERS, INC.	Via (Engineer): SHOWS, DEARMAN & WAITS, INC.
Project: COMPREHENSIVE SEWER PHASE 5	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS	\$ -	\$ -
NET CHANGE BY CHANGE ORDERS	\$ -	

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: Date: **12/4/2019**

1. ORIGINAL CONTRACT PRICE	\$ 1,077,240.50
2. Net change by Change Orders	\$ -
3. CURRENT CONTRACT PRICE (LINE 1 + 2)	\$ 1,077,240.50
4. TOTAL COMPLETED AND STORED TO DATE (Column F on Progress Estimates)	\$ 1,218,339.48
5. RETAINAGE:	
a. 5.0 % x Work Completed	\$ -
b. 5.0% x Stored Material	\$ -
c. Total Retainage (line 5a + line 5b)	\$ -
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c)	\$ 1,218,339.48
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	\$ 1,108,555.59
8. AMOUNT DUE THIS APPLICATION	\$ 109,783.89
9. BALANCE TO FINISH, PLUS RETAINAGE	
(Column G on Progress Estimate + Line 5 above)	\$ (97,561.21)

Payment of:

\$109,783.89

(Line 8 or other - attach explanation of other amount)

Is recommended by:

(Engineer)

12-16-19
(Date)

Payment of:

\$109,783.89

(Line 8 or other - attach explanation of other amount)

Is approved by:

(Owner)

(Date)

Is approved by:

(Owner)

(Date)

Approved by:

(Funding Agency, if applicable)

(Date)

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):				Application Number: 11						
Application Period: 12/1/2018 TO 4/30/2018				Application Date: 4-Dec-19						
	A	Bid Quantity	Unit Price	B	C	D	E	F		G
Pay Item	Item Description			Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (B - F)
	SITE 1-DOGWOOD DRIVE									
1	4" 160 PSI PVC SANITARY SEWER FORCE MAIN (ALL DEPTHS)	1000.0	\$ 7.84	\$ 7,840.00	982	\$ 7,698.88	\$0.00	\$ 7,698.88	98%	\$ 141.12
2	8" SDR 26 PVC SEWER PIPE (0'-6')	1098.0	\$ 24.16	\$ 26,527.68	966	\$ 23,338.56	\$0.00	\$ 23,338.56	88%	\$ 3,189.12
3	8" SDR 26 PVC SEWER PIPE (6'-8')	601.0	\$ 26.56	\$ 15,962.56	707	\$ 18,777.92	\$0.00	\$ 18,777.92	118%	\$ (2,815.36)
4	8" SDR 26 PVC SEWER PIPE (8'-10')	123.0	\$ 38.55	\$ 4,741.65	146	\$ 5,628.30	\$0.00	\$ 5,628.30	119%	\$ (886.65)
5	8" SDR 26 PVC SEWER PIPE (10'-12')	101.0	\$ 43.34	\$ 4,377.34	48	\$ 2,080.32	\$0.00	\$ 2,080.32	48%	\$ 2,297.02
6	8" SDR 26 PVC SEWER PIPE (12'-14')	135.0	\$ 48.14	\$ 6,498.90	55	\$ 2,647.70	\$0.00	\$ 2,647.70	41%	\$ 3,851.20
7	AIR RELEASE AND VACUUM VALVE ASSEMBLY (INCLUDING PR	1.0	\$ 4,189.24	\$ 4,189.24	1	\$ 4,189.24	\$0.00	\$ 4,189.24	100%	\$ -
	MANHOLE ITEMS									
8	48" PRECAST CONCRETE SEWER MANHOLE (0'-6')	3.0	\$ 2,689.82	\$ 8,069.46	2	\$ 5,379.64	\$0.00	\$ 5,379.64	67%	\$ 2,689.82
9	48" PRECAST CONCRETE SEWER MANHOLE (6'-8')	8.0	\$ 3,176.78	\$ 25,414.24	7	\$ 22,237.46	\$0.00	\$ 22,237.46	88%	\$ 3,176.78
10	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')	1.0	\$ 3,658.87	\$ 3,658.87	1	\$ 3,658.87	\$0.00	\$ 3,658.87	100%	\$ -
11	48" PRECAST CONCRETE SEWER MANHOLE (10'-12')	1.0	\$ 4,190.30	\$ 4,190.30	-	\$ -	\$0.00	\$ -	0%	\$ 4,190.30
12	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')	1.0	\$ 4,382.73	\$ 4,382.73	1	\$ 4,382.73	\$0.00	\$ 4,382.73	100%	\$ -
	SEWER SERVICE ITEMS									
13	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)	942.0	\$ 10.60	\$ 9,985.20	898	\$ 9,518.80	\$0.00	\$ 9,518.80	95%	\$ 466.40
14	8" X 8" X 6" PVC TEE	8.0	\$ 323.75	\$ 2,590.00	9	\$ 2,913.75	\$0.00	\$ 2,913.75	113%	\$ (323.75)
15	6" PVC CLEANOUT	8.0	\$ 359.74	\$ 2,877.92	15	\$ 5,396.10	\$0.00	\$ 5,396.10	188%	\$ (2,518.18)
	LIFT STATION ITEMS									
16	LIFT STATION INCL CLEARING AND GRUBBING, BORROW MAT	1.0	\$ 207,236.80	\$ 207,236.80	1	\$ 207,236.80	\$0.00	\$ 207,236.80	100%	\$ -
	MISCELLANEOUS CONSTRUCTION ITEMS									
17	ABANDONMENT OF SEPTIC TANKS	7.0	\$ 359.68	\$ 2,517.76	9	\$ 3,237.12	\$0.00	\$ 3,237.12	129%	\$ (719.36)
18	DROP MANHOLE ASSEMBLY (ALL DEPTHS)	3.0	\$ 869.23	\$ 2,607.69	3	\$ 2,607.69	\$0.00	\$ 2,607.69	100%	\$ -
19	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTING	4.0	\$ 599.95	\$ 2,399.80	-	\$ -	\$0.00	\$ -	0%	\$ 2,399.80
20	CRUSHED AGGREGATE (SIZE 825)	612.0	\$ 44.96	\$ 27,515.52	901	\$ 40,508.96	\$0.00	\$ 40,508.96	147%	\$ (12,993.44)
	TOTALS			\$ 373,583.66		\$ 371,438.84	\$0.00	\$ 371,438.84		\$ 2,144.82

EJCDC No. C-620 (2002 Edition)

1/11/1900

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):				Application Number: 11						
Application Period: 12/1/2018 TO 4/30/2018				Application Date: 4-Dec-19						
Pay Item	A Item Description	Bid Quantity	Unit Price	B Bid Value	C Estimated Quantity Installed	D Value	E Materials Stored (not in C)	F Total Completed and Stored to Date (D + E)	% (F)	G Balance to Finish (B - F)
	Subtotal from Previous Page			\$ 373,583.66		\$ 371,438.84	\$0.00	\$ 371,438.84		\$ 2,144.82
21	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	2495.0	\$ 10.79	\$ 26,921.05	128	\$ 1,381.12	\$0.00	\$ 1,381.12	5%	\$ 25,539.93
22	HOT MIX ASPHALT, ST, 9.5MM	208.0	\$ 167.85	\$ 34,912.80	388	\$ 65,125.80	\$0.00	\$ 65,125.80	187%	\$ (30,213.00)
23	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	57.0	\$ 59.95	\$ 3,417.15	40	\$ 2,398.00	\$0.00	\$ 2,398.00	70%	\$ 1,019.15
24	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)	16.0	\$ 11.99	\$ 191.84	72	\$ 863.28	\$0.00	\$ 863.28	450%	\$ (671.44)
25	30" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	16.0	\$ 95.92	\$ 1,534.72		\$ -	\$0.00	\$ -	0%	\$ 1,534.72
26	CLASS "B" CONCRETE, MINOR STRUCTURES	5.0	\$ 2,353.82	\$ 11,769.10	6	\$ 14,122.92	\$0.00	\$ 14,122.92	120%	\$ (2,353.82)
27	GRASSING	1.0	\$ 3,896.56	\$ 3,896.56	1	\$ 3,896.56	\$0.00	\$ 3,896.56	100%	\$ -
28	EROSION CONTROL	1.0	\$ 6,594.17	\$ 6,594.17	1	\$ 6,594.17	\$0.00	\$ 6,594.17	100%	\$ -
29	MOBILIZATION	1.0	\$ 44,960.26	\$ 44,960.26	1	\$ 44,960.26	\$0.00	\$ 44,960.26	100%	\$ -
30	MAINTENANCE OF TRAFFIC	1.0	\$ 29,973.50	\$ 29,973.50	1	\$ 29,973.50	\$0.00	\$ 29,973.50	100%	\$ -
	SITE 2-CORRINE STREET, EMERALD LANE & DUKE AVENUE									
1	8" SDR 26 PVC SEWER PIPE (6'-8')	243.0	\$ 24.46	\$ 5,943.78	448	\$ 10,958.08	\$0.00	\$ 10,958.08	184%	\$ (5,014.30)
2	8" SDR 26 PVC SEWER PIPE (8'-10')	635.0	\$ 26.56	\$ 16,865.60	865	\$ 22,974.40	\$0.00	\$ 22,974.40	136%	\$ (6,108.80)
3	8" SDR 26 PVC SEWER PIPE (10'-12')	125.0	\$ 28.95	\$ 3,618.75	115	\$ 3,329.25	\$0.00	\$ 3,329.25	92%	\$ 289.50
4	8" SDR 26 PVC SEWER PIPE (12'-14')	137.0	\$ 31.35	\$ 4,294.95	145	\$ 4,545.75	\$0.00	\$ 4,545.75	106%	\$ (250.80)
5	8" SDR 26 PVC SEWER PIPE (14'-16')	102.0	\$ 36.15	\$ 3,687.30	102	\$ 3,687.30	\$0.00	\$ 3,687.30	100%	\$ -
6	8" SDR 26 PVC SEWER PIPE (16'-18')	187.0	\$ 40.94	\$ 7,655.78	327	\$ 13,387.38	\$0.00	\$ 13,387.38	175%	\$ (5,731.60)
7	8" SDR 11 HDPE SEWER SERVICE BORE	275.0	\$ 59.47	\$ 16,354.25	268	\$ 15,937.96	\$0.00	\$ 15,937.96	97%	\$ 416.29
8	15" SDR 26 PVC SEWER PIPE (6'-8')	733.0	\$ 38.50	\$ 28,220.50	647	\$ 24,909.50	\$0.00	\$ 24,909.50	88%	\$ 3,311.00
9	15" SDR 26 PVC SEWER PIPE (8'-10')	336.0	\$ 43.29	\$ 14,545.44	315	\$ 13,636.35	\$0.00	\$ 13,636.35	94%	\$ 909.09
10	15" SDR 26 PVC SEWER PIPE (10'-12')	225.0	\$ 48.09	\$ 10,820.25	266	\$ 12,791.94	\$0.00	\$ 12,791.94	118%	\$ (1,971.69)
11	24" STEEL CASING (BORED)	60.0	\$ 213.46	\$ 12,807.60	30	\$ 6,403.80	\$0.00	\$ 6,403.80	50%	\$ 6,403.80
	MANHOLE ITEMS									
12	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')	3.0	\$ 3,179.29	\$ 9,537.87	4	\$ 12,717.16	\$0.00	\$ 12,717.16	133%	\$ (3,179.29)
13	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')	1.0	\$ 3,663.36	\$ 3,663.36	1	\$ 3,663.36	\$0.00	\$ 3,663.36	100%	\$ -
	TOTALS			\$ 675,770.24		\$ 689,696.68	\$0.00	\$ 689,696.68		\$ (13,926.44)

EJCDC No. C-620 (2002 Edition)

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):		COMPREHENSIVE SEWER PHASE 5				Application Number: 11				
Application Period:		12/1/2018 TO 4/30/2018				Application Date: 4-Dec-19				
Pay Item	Item Description	Bid Quantity	Unit Price	Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (G - F)
	Subtotal from Previous Page			\$ 675,770.24		\$ 689,696.68	\$0.00	\$ 689,696.68		\$ (13,926.44)
14	48" PRECAST CONCRETE SEWER MANHOLE (14'-16')	1.0	\$ 4,675.87	\$ 4,675.87	1	\$ 4,675.87	\$0.00	\$ 4,675.87	100%	\$ -
15	60" PRECAST CONCRETE SEWER MANHOLE (6'-8')	3.0	\$ 4,615.92	\$ 13,847.76	2	\$ 9,231.84	\$0.00	\$ 9,231.84	67%	\$ 4,615.92
16	60" PRECAST CONCRETE SEWER MANHOLE (10'-12')	2.0	\$ 4,991.79	\$ 9,983.58	3	\$ 14,975.37	\$0.00	\$ 14,975.37	150%	\$ (4,991.79)
17	DROP MANHOLE ASSEMBLY (ALL DEPTHS)	3.0	\$ 869.23	\$ 2,607.69	1	\$ 869.23	\$0.00	\$ 869.23	33%	\$ 1,738.46
18	DEMOLITION AND REMOVAL OF EXISTING SEWER MANHOLE	8.0	\$ 1,498.68	\$ 11,989.44	8	\$ 11,989.44	\$0.00	\$ 11,989.44	100%	\$ -
	SEWER SERVICE ITEMS									
19	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)	270.0	\$ 10.56	\$ 2,851.20	846	\$ 8,933.76	\$0.00	\$ 8,933.76	313%	\$ (6,082.56)
20	8" X 8" X 6" PVC TEE	3.0	\$ 323.75	\$ 971.25	15	\$ 4,856.25	\$0.00	\$ 4,856.25	500%	\$ (3,885.00)
21	SERVICE CONNECTION (INSERT A TEE)	6.0	\$ 585.08	\$ 3,510.48	17	\$ 9,946.36	\$0.00	\$ 9,946.36	283%	\$ (6,435.88)
22	6" PVC CLEANOUT	9.0	\$ 370.47	\$ 3,334.23	32	\$ 11,855.04	\$0.00	\$ 11,855.04	356%	\$ (8,520.81)
	MISCELLANEOUS CONSTRUCTION ITEMS									
23	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTING)	8.0	\$ 669.01	\$ 5,352.08	11	\$ 7,359.11	\$0.00	\$ 7,359.11	138%	\$ (2,007.03)
24	CRUSHED AGGREGATE (SIZE 825)	1387.0	\$ 44.96	\$ 62,359.52	1,390.98	\$ 62,538.46	\$0.00	\$ 62,538.46	100%	\$ (178.94)
25	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	8090.0	\$ 11.39	\$ 92,145.10	3,332	\$ 37,951.48	\$0.00	\$ 37,951.48	41%	\$ 54,193.62
26	HOT MIX ASPHALT, ST, 9.5MM	530.0	\$ 167.85	\$ 88,960.50	1,165	\$ 195,545.25	\$0.00	\$ 195,545.25	220%	\$ (106,584.75)
27	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	25.0	\$ 59.95	\$ 1,498.75	26	\$ 1,558.70	\$0.00	\$ 1,558.70	104%	\$ (59.95)
28	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)	180.0	\$ 11.99	\$ 2,158.20	288	\$ 3,453.12	\$0.00	\$ 3,453.12	160%	\$ (1,294.92)
29	12" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	24.0	\$ 39.57	\$ 949.68	-	\$ -	\$0.00	\$ -	0%	\$ 949.68
30	18" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	64.0	\$ 43.16	\$ 2,762.24	168	\$ 7,250.88	\$0.00	\$ 7,250.88	263%	\$ (4,488.64)
31	21" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	40.0	\$ 52.75	\$ 2,110.00	-	\$ -	\$0.00	\$ -	0%	\$ 2,110.00
32	24" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	48.0	\$ 70.74	\$ 3,395.52	120	\$ 8,488.80	\$0.00	\$ 8,488.80	250%	\$ (5,093.28)
33	CLASS "B" CONCRETE, MINOR STRUCTURES	1.0	\$ 2,381.10	\$ 2,381.10	-	\$ -	\$0.00	\$ -	0%	\$ 2,381.10
34	GRASSING	1.0	\$ 3,896.56	\$ 3,896.56	1	\$ 3,896.56	\$0.00	\$ 3,896.56	100%	\$ -
35	EROSION CONTROL	1.0	\$ 7,793.11	\$ 7,793.11	1	\$ 7,793.11	\$0.00	\$ 7,793.11	100%	\$ -
36	MOBILIZATION	1.0	\$ 41,962.90	\$ 41,962.90	1.00	\$ 41,962.90	\$0.00	\$ 41,962.90	100%	\$ -
	TOTALS			\$ 1,047,267.00		\$ 1,144,828.21	\$0.00	\$ 1,144,828.21		\$ (97,561.21)

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Contractor's Application

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Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
	SITE 1-DOGWOOD DRIVE														0
1	4" 160 PSI PVC SANITARY SEWER FORCE MAIN (ALL DEPTHS)						745	237							982
2	8" SDR 26 PVC SEWER PIPE (0'-6')					423	543								966
3	8" SDR 26 PVC SEWER PIPE (6'-8')					151	184	372							707
4	8" SDR 26 PVC SEWER PIPE (8'-10')					96	50								146
5	8" SDR 26 PVC SEWER PIPE (10'-12')						48								48
6	8" SDR 26 PVC SEWER PIPE (12'-14')						55								55
7	AIR RELEASE AND VACUUM VALVE ASSEMBLY (INCLUDING PRECAST CONCRETE MANHOLE)							1							1
	MANHOLE ITEMS														0
8	48" PRECAST CONCRETE SEWER MANHOLE (0'-6')						1			1					2
9	48" PRECAST CONCRETE SEWER MANHOLE (6'-8')					3	2			2					7
10	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')					1									1
11	48" PRECAST CONCRETE SEWER MANHOLE (10'-12')														0
12	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')						1								1
	SEWER SERVICE ITEMS														0
13	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)					144	369	282		103					898
14	8" X 8" X 6" PVC TEE					2	4	2		1					9
15	6" PVC CLEANOUT					3	4	3		5					15
	LIFT STATION ITEMS														0
16	LIFT STATION INCL CLEARING AND GRUBBING, BORROW MATERIAL, CRUSHED AGGREGATE, CO					0.25	0.5		0.2	0.05					1
	MISCELLANEOUS CONSTRUCTION ITEMS														0
17	ABANDONMENT OF SEPTIC TANKS									5	4				9
18	DROP MANHOLE ASSEMBLY (ALL DEPTHS)									3					3
19	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTINGS, CORP STOP, CURB STOP, TAPPING SADDLE, ETC.)														0
20	CRUSHED AGGREGATE (SIZE #25)					12.08		77.75	784.35		13.1		14.16		901

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
21	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM					56					72				128
22	HOT MIX ASPHALT, ST, 9.5MM							88.98				299.15			388
23	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)										40.11				40
24	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)								72						72
25	30" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS														0
26	CLASS "B" CONCRETE, MINOR STRUCTURES											5.5			6
27	GRASSING										0.5				1
28	EROSION CONTROL						0.5				0.25				1
29	MOBILIZATION					1									1
30	MAINTENANCE OF TRAFFIC					0.5	0.25		0.25						1
	SITE 2-CORRINE STREET, EMERALD LANE & DUKE AVENUE														0
1	8" SDR 26 PVC SEWER PIPE (6'-8')			28	420										448
2	8" SDR 26 PVC SEWER PIPE (8'-10')			111	754										865
3	8" SDR 26 PVC SEWER PIPE (10'-12')			115											115
4	8" SDR 26 PVC SEWER PIPE (12'-14')			145											145
5	8" SDR 26 PVC SEWER PIPE (14'-16')			77	25										102
6	8" SDR 26 PVC SEWER PIPE (16'-18')			215	112										327
7	8" SDR 11 HDPE SEWER SERVICE BORE			268											268
8	15" SDR 26 PVC SEWER PIPE (6'-8')		647												647
9	15" SDR 26 PVC SEWER PIPE (8'-10')	200	115												315
10	15" SDR 26 PVC SEWER PIPE (10'-12')	98	168												266
11	24" STEEL CASING (BORED)		30												30
	MANHOLE ITEMS														0
12	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')				4										4
13	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')			1											1

Monthly Totals

	DESCRIPTION	1 Estimated Quantity Installed	2 Estimated Quantity Installed	3 Estimated Quantity Installed	4 Estimated Quantity Installed	5 Estimated Quantity Installed	6 Estimated Quantity Installed	7 Estimated Quantity Installed	8 Estimated Quantity Installed	9 Estimated Quantity Installed	10 Estimated Quantity Installed	11 Estimated Quantity Installed	12 Estimated Quantity Installed	13 Estimated Quantity Installed	TOTAL Estimated Quantity Installed
14	48" PRECAST CONCRETE SEWER MANHOLE (14'-16')			1											1
15	60" PRECAST CONCRETE SEWER MANHOLE (6'-8')		2												2
16	60" PRECAST CONCRETE SEWER MANHOLE (6'-8')	2	1												3
17	DROP MANHOLE ASSEMBLY (ALL DEPTHS)		1												1
18	DEMOLITION AND REMOVAL OF EXISTING SEWER		5		3										8
	SEWER SERVICE ITEMS														0
19	6" SDR 26 PVC SEWER PIPE (F)	17	236	333	260										846
20	8" X 8" X 6" PVC TEE			10	5										15
21	SERVICE CONNECTION (INSERT)	1	16												17
22	6" PVC CLEANOUT	1	13	11	7										32
	MISCELLANEOUS CONSTRUCTION ITEMS														0
23	WATER SERVICE REPAIR (INCLUDING SERVICE)		3	8											11
24	CRUSHED AGGREGATE (SIZE 1/2")	111.39	538.72	451.21	232								57.66		1390.98
25	SELECT FILL MATERIAL (CLASS 9, GROUP C), LV		716	1762	854			64.05				-64.05			3332
26	HOT MIX ASPHALT, ST, 9.5MM							725.83			375.41	64.05			1165
27	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)				26.08										26
28	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)		88		200										288
29	12" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS														0
30	18" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	40	48		80										168
31	21" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS														0
32	24" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS				120										120
33	CLASS "B" CONCRETE, MINOR STRUCTURES		0												0
34	GRASSING										1				1
35	EROSION CONTROL				0.5		0.5								1
36	MOBILIZATION	0.5	0.5												1

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
37	MAINTENANCE OF TRAFFIC		0.5		0.5										1
SA31	6" CLASS 350 DUCTILE IRON WATER MAIN												620		620
SA32	3-WAY FIRE HYDRANT W/APPERT INCLE TEE AND VALVE												1		1
SA33	REMOVE, RELOCATE WATER METERS												6		6
SA34	SERVICE TUBING												250		250
SA35	18" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS												152		152
SA36	DROP INLETS												3		3
0		0													0
0		0													0
0		0													0
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Engineering Progress

December 23, 2019

City of Hattiesburg
Post Office Box 1898
Hattiesburg MS 39403-1898

Attn: Lamar Rutland, P.E.

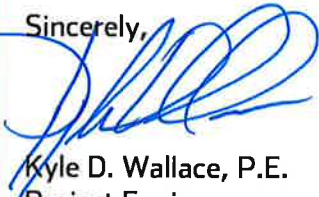
RE: Comprehensive Sewer Improvements Ph XII
City of Hattiesburg

Dear Mr. Rutland:

Enclosed please find Pay Estimate No. 5 in the amount of \$83,696.14 for the above referenced project.

Should you have any questions and/or comments, please, do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'K. Wallace'.

Kyle D. Wallace, P.E.
Project Engineer

/md

cc: DNA Underground, LLC
SDW files



Contractor's Application for Payment No. 5	
Application Period: 11/1/19 to 11/30/19	Application Date: 12/16/2019
To (Owner): City of Hattiesburg	Via (Engineer):
Project: Comprehensive Sewer Improvements - Phase XII	
Owner's Contract No.: 1273-5012	Engineer's Project:

Application For Payment
Change Order Summary

Approved Change Orders	Number	Additions	Deductions	1. ORIGINAL CONTRACT PRICE	\$ 519,136,940.00
				2. Net change by Change Orders	\$
				3. Current Contract Price (Line 1 ± 2)	\$ 519,136,940.00
				4. TOTAL COMPLETED AND STORED TO DATE (Column F total on Progress Estimates)	\$ 519,136,940.00
				5. RETAINAGE:	\$ 519,136,940.00
				a. 5% X \$377,525.50 Work Completed	\$ 18,876.28
				b. 5% X Stored Material	\$
				c. Total Retainage (Line 5.a + Line 5.b)	\$ 18,876.28
				6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c)	\$ 519,136,940.00
				7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	\$ 519,136,940.00
				8. AMOUNT DUE THIS APPLICATION	\$ 519,136,940.00
				9. BALANCE TO FINISH, PLUS RETAINAGE (Column G total on Progress Estimates + Line 5.c above)	\$ 519,136,940.00

Contractor's Certification

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:

By: Michael J. Dutton Date: 12/18/19

Subscribed and sworn to me this 18th day of December, 2019

Notary Public: Kym Dutton

My Commission Expires: May 14, 2020



Payment of: \$ 83,696.14 (Line 8 or other - attach explanation of the other amount)

is recommended by [Signature] (Engineer) 12-23-19 (Date)

Payment of: \$ _____ (Line 8 or other - attach explanation of the other amount)

is approved by: _____ (Owner) _____ (Date)

Approved by: _____ Funding or Financing Entity (if applicable) _____ (Date)

Progress Estimate - Unit Price Work

Contractor's Application

Comprehensive Sewer Improvements - Phase XII																	Application Number: 5						
Application Period: 11/1/19 to 11/30/19																	Application Date: 16-Dec-19						
A				B				C				D		E		F							
Item		Contract Information						Quantity Previous App		Value Previous		Estimated Quantity Installed		Value of Work Installed to Date		Materials Presently Stored		Total Completed and Stored to Date (E+F+G)		% (H / B)		Balance to Finish (B - H)	
Bid Item No.	Description	Item Quantity	Units	Unit Price	Total Value	of Item (\$)																	
Sewer Pipe Items																							
1	4" PVC Sewer Force Main (All Depths)(Open Cut)																						

Progress Estimate - Unit Price Work

Contractor's Application

Comprehensive Sewer Improvements - Phase XII																				
Application Number: 5																				
Application Period: 11/1/19 to 11/30/19																				
Application Date: 16-Dec-19																				
Item			A			B			C			E			D			F		
Bid Item No.	Description	Item Quantity	Units	Contract Information			Quantity Previous App	Value Previous	Estimated Quantity Installed	Value of Work Installed to Date	Materials Preszably Stored	Total Completed and Stored to Date (E+F+G)	% (H / B)	Balance to Finish (B - H)						
				Unit Price	Total Value	of Item (\$)														
28	24" Steel Casing (0.26" WT)(All Depths)(Bored)	260	LF	\$	285.00	\$	196.5	\$	-	401.5	\$1,606.00	\$2,392.00	13.1%	\$ 74,100.00						
29	Removal of Existing Sewer Line	4680	LF	\$	4.00	\$		\$	-					\$ 15,848.00						
30	Abandonment of Existing Sewer Line (All Sizes)	160	LS	\$	10.00	\$		\$	-					\$ 1,500.00						
31	Tracer Wire System for Sewer	1	LS	\$	5,800.00	\$	0.151	\$	875.80	0.044	\$255.20	\$1,131.00	19.5%	\$ 4,669.00						
Sewer Manhole Items																				
32	48" Precast Concrete Sewer Manhole (0'-5')	1	EA	\$	4,000.00	\$		\$	-					\$ 4,000.00						
33	48" Precast Concrete Sewer Manhole (0'-8')(Flat Top)	1	EA	\$	4,000.00	\$	1	\$	4,000.00			\$4,000.00	100.0%	\$ -						
34	48" Precast Concrete Sewer Manhole (6'-8')	6	EA	\$	4,500.00	\$	5	\$	22,500.00			\$22,500.00	100.0%	\$ -						
35	48" Precast Concrete Sewer Manhole (6'-8')(Doghouse)	1	EA	\$	5,000.00	\$	1	\$	5,000.00			\$5,000.00	100.0%	\$ -						
36	60" Precast Concrete Sewer Manhole (10'-12')	8	EA	\$	7,000.00	\$	1	\$	7,000.00	1	\$7,000.00	\$14,000.00	33.3%	\$ 28,000.00						
37	60" Precast Concrete Sewer Manhole (12'-14')	2	EA	\$	8,500.00	\$		\$	-	1	\$8,500.00	\$8,500.00	50.0%	\$ 8,500.00						
38	60" Precast Concrete Sewer Manhole (14'-16')	3	EA	\$	9,000.00	\$		\$	-					\$ 27,000.00						
39	60" Precast Concrete Sewer Manhole (16'-18')	2	EA	\$	10,000.00	\$		\$	-					\$ 20,000.00						
40	60" Precast Concrete Sewer Manhole (18'-20')	1	EA	\$	11,800.00	\$		\$	-					\$ 11,800.00						
41	60" Precast Concrete Sewer Manhole (20'-22')	1	EA	\$	12,500.00	\$		\$	-					\$ 12,500.00						
42	72" Precast Concrete Sewer Manhole (10'-12')	1	EA	\$	10,000.00	\$	1	\$	10,000.00			\$10,000.00	100.0%	\$ -						
43	72" Precast Concrete Sewer Manhole (16'-18')	1	EA	\$	14,000.00	\$		\$	-					\$ 14,000.00						
44	Demolition and Removal of Existing Manhole (All Depths & Types)	18	EA	\$	450.00	\$	2	\$	900.00	2	\$900.00	\$1,800.00	22.2%	\$ 6,300.00						
45	Abandonment of Existing Manholes	1	EA	\$	800.00	\$		\$	-					\$ 800.00						
46	Drop Manhole Assembly (All Depths)	10	EA	\$	2,500.00	\$	1	\$	2,500.00	1	\$2,500.00	\$5,000.00	20.0%	\$ 20,000.00						
Sewer Service Items																				
47	4" Sanitary Sewer Service Cleanout (As Detailed)	80	EA	\$	200.00	\$	5	\$	1,000.00	4	\$800.00	\$1,800.00	11.3%	\$ 14,200.00						
48	4" SDR 26 PVC Pipe Sanitary Sewer Service (Incl. fittings)(All Depths)	800	LF	\$	12.00	\$		\$	-					\$ 9,600.00						
49	6" SDR 26 PVC Pipe Sanitary Sewer Service (Incl. fittings)(All Depths)	1320	LF	\$	12.00	\$	125	\$	1,500.00	80	\$960.00	\$2,460.00	15.5%	\$ 13,380.00						
50	6" SDR 26 PVC Pipe Sanitary Sewer Service (Incl. fittings)(Bored)	980	LF	\$	32.00	\$		\$	-					\$ 31,680.00						
51	8"x8"x6" PVC Service Tee	21	EA	\$	150.00	\$	7	\$	1,050.00			\$1,050.00	33.3%	\$ 2,100.00						

Contractor's Application

EJCDC® C-620 Contractor's Application for Payment
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Page 3 of 4

Progress Estimate - Unit Price Work

Contractor's Application

Comprehensive Sewer Improvements - Phase XII													Application Number: 5		
Application Period: 11/1/19 to 11/30/19													Application Date: 16-Dec-19		
Item		Contract Information				B		C	E	C	D	E	F		
Bid Item No.	Description	Item Quantity	Units	Unit Price	Total Value	of Item (\$)		Quantity Previous App	Value Previous	Estimated Quantity Installed	Value of Work Installed to Date	Materials Presently Stored	Total Completed and Stored to Date (E+F+G)	% (H / B)	Balance to Finish (B - H)
77	Solid Sod (Incl. Sod, Top Soil, Fertilizer, Watering, etc.)	5530	SY	\$ 6.00	\$ 33,180.00				\$ -						\$ 33,180.00
78	Landscape Restoration (Incl. Top Soil, Plants, Mulch, Watering, etc.)	1500	SF	\$ 6.00	\$ 9,000.00				\$ -						\$ 9,000.00
79	Clearing and Grubbing	1	LS	\$ 5,000.00	\$ 5,000.00			0.75	\$ 3,750.00				\$3,750.00	75.0%	\$ 1,250.00
80	Temporary Erosion Control	1	LS	\$ 20,000.00	\$ 20,000.00			0.151	\$ 3,020.00	0.044	\$880.00		\$3,900.00	19.5%	\$ 16,100.00
81	Maintenance of Traffic	1	LS	\$ 60,000.00	\$ 60,000.00			0.151	\$ 9,060.00	0.044	\$2,640.00		\$11,700.00	19.5%	\$ 48,300.00
82	Mobilization	1	LS	\$ 185,000.00	\$ 185,000.00			0.5	\$ 92,500.00				\$92,500.00	50.0%	\$ 92,500.00
Totals					\$ 1,913,694.00				\$ 289,424.30		\$88,101.20		\$377,525.50	19.7%	\$ 1,536,168.50

Hattiesburg, Mississippi does hereby certify to Regions 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 Series 2016 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 August 18, 2016 (the “Loan Agreement”).
- (4) The payment herein authorized and approved is a proper charge against the Series 2016 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)

As Approved by:

Regions Commercial Equipment Finance, LLC
As Purchaser

Authorized Officer



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, January 7, 2020

Re: Approve Supplemental Agreement No. 1 - Final with C. B. Developers to adjust quantities to actual and add additional items for a Net Increase of \$141,098.98 to the contract for Comprehensive Sewer Improvements Project Phase V;
Acknowledge receipt of closing documents; authorize final acceptance of project, payment of invoice and Mayor to execute the same.
File Number: 2020-4
Minute Book #

Summary

Approve and Authorize Mayor to executed Supplemental Agreement No. 1 - Final with C. B. Developers to adjust quantities to actual and add additional items for a Net Increase of \$141,098.98 to the contract for Comprehensive Sewer Improvements Project Phase V;
Acknowledge receipt of closing documents; Authorize final acceptance of project;
Authorize payment of Final invoice.

Recommendation Statement

This closes out the Comprehensive Sewer Improvements Phase V project. I recommend approval.

Please place this on the January 7, 2020 City Council meeting for consideration.



Engineering Progress

December 16, 2019

City of Hattiesburg
PO Box 1898
Hattiesburg MS 39403-1898

Attn: Lamar Rutland, P.E.

**RE: Comprehensive Sewer Improvements Phase V
City of Hattiesburg**

Dear Mr. Rutland:

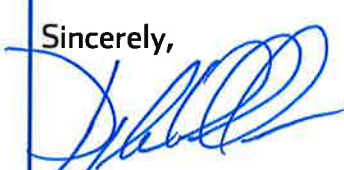
This is to certify the above referenced project has been completed in accordance with the previously approved plans and specifications.

Enclosed are the following documents:

1. Contractor's Guarantee of Work
2. Warranty Letter
3. Contractor's Affidavit of Payment of Debts
4. Consent of Surety to final Payment
5. Pay Estimate No. 11 for the contractor in the amount of \$69,520.62
6. The final Pay Estimate no. 12 for the contractor in the amount of \$109,783.89
7. Supplemental No. 1 with Overrun/Underrun Statement that needs to be signed and two (2) copies returned to our office

Please do not hesitate to contact me should you have questions or comments.

Sincerely,



Kyle D. Wallace, P.E.
Project Engineer

/md

enclosures

C. B. Developers, Inc.

1716 Evelyn Gandy Pkwy
Hattiesburg, MS 39401

Ph. 601-582-1600
Fax 601-583-0005

December 04, 2019

Kyle Wallace
Shows, Dearman & Waits, Inc
301 Second Avenue
Hattiesburg, MS 39401

Re: Comprehensive Water Improvements Phase V
City of Hattiesburg, MS

Gentlemen:

We would like to request substantial completion on the above project starting on the 2nd day of August 2019. The project is able to be used for its intended use.

Respectfully,



Mack Lister – Project Manager
C.B. Developers, Inc.

C. B. Developers, Inc.

1716 Evelyn Gandy Pkwy
Hattiesburg, MS 39401

Ph. 601-582-1600
Fax 601-583-0005

December 04, 2019

Kyle Wallace
Shows, Dearman & Waits, Inc
301 Second Avenue
Hattiesburg, MS 39401

Re: Comprehensive Water Improvements Phase V
City of Hattiesburg, MS

Gentlemen:

Pursuant to ARTICLE 25- WARRANTY AND GUARANTEE, etc., in General Conditions, C.B. Developers, Inc. herewith invokes a One Year Warranty on the above referenced project beginning August 2, 2019 and ending August 2, 2020. This warranty includes all materials and work performed on the above referenced project.

Respectfully,



Mack Lister – Project Manager
C.B. Developers, Inc.

**AIA®****Document G706™ – 1994****Contractor's Affidavit of Payment of Debts and Claims****PROJECT:** *(Name and address)***ARCHITECT'S PROJECT NUMBER:**OWNER ☐

COMPREHENSIVE SEWER PHASE 5

CONTRACT FOR: \$1,218,339.48ARCHITECT ☐CONTRACTOR ☐**TO OWNER:** *(Name and address)***CONTRACT DATED:** 9/05/2017SURETY ☐

CITY OF HATTIESBURG, MISSISSIPPI

OTHER ☐**STATE OF:** MISSISSIPPI**COUNTY OF:** FORREST

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:**SUPPORTING DOCUMENTS ATTACHED HERETO:**

1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707™, Consent of Surety to Final Payment, may be used for this purpose.

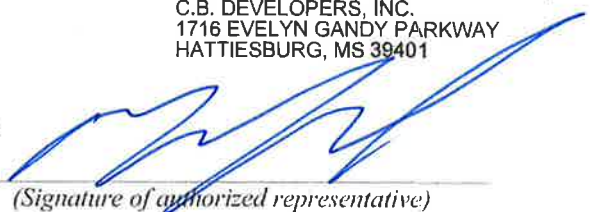
Indicate attachment: ☐ Yes ☐ No

The following supporting documents should be attached hereto if required by the Owner:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof
3. Contractor's Affidavit of Release of Liens (AIA Document G706A™)

CONTRACTOR: *(Name and address)*

C.B. DEVELOPERS, INC.
1716 EVELYN GANDY PARKWAY
HATTIESBURG, MS 39401

BY:


(Signature of authorized representative)

MACK LISTER - PROJECT MANAGER
(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public: *Stephanie*

My Commission Expires: 1-18-20



CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original as shown that changes will not be obscured.

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070809A/C242

AIA Document G706™ – 1994 Instructions

Contractor's Affidavit of Payment of Debts and Claims

GENERAL INFORMATION

Purpose. AIA Document G706™ is intended for use when the Contractor is required to provide a sworn statement verifying that debts and claims have been settled, except for those listed by the Contractor under "EXCEPTIONS" in the document. AIA Document G706 is typically executed as a condition of final payment.

Related Documents. This document may be used with most of the AIA's Owner-Contractor agreements and general conditions, such as AIA Document A201™ and its related family of documents. G706 also requires the attachment of several supporting documents, including AIA Documents G706A™, Contractor's Affidavit of Release of Liens, and G707™, Consent of Surety to Reduction in or Release of Retainage.

Use of Current Documents. Prior to using any AIA Contract Document, users should consult the AIA, an AIA component chapter or a current AIA Documents List to determine the current edition of each document.

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To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal counsel, copyright@aia.org.

CHANGES FROM THE PREVIOUS EDITION

A cross-reference to AIA Document A201 has been deleted to permit the use of G706 with other families of AIA documents, including Construction Management, Interiors and Design-Build.

COMPLETING G706

General. The Owner-Contractor Agreement is the usual source of required information such as the contract date and the names and addresses of the Owner, Project and Contractor.

Architect's Project No. This information is typically supplied by the Architect and entered on the form by the Contractor.

Contract For. This refers to the scope of the contract, such as General Construction or Mechanical Work.

Affidavit. Indicate the state and county where the Affidavit is made. This is not necessarily the same location as the Project, but should be the location where the notary is authorized to administer sworn oaths. If there are any EXCEPTIONS to the statement, these should be listed in the space provided; otherwise enter as "None." It may be a stipulation of the Contract Documents that the Owner has the right to require the Contractor to furnish a bond to cover each exception listed on the Affidavit.

Supporting Documents. The AIA documents listed as attachments to the G706 form should be of the same (current) edition date as G706. The AIA does not publish a "Release or Waiver of Liens" for contractors or subcontractors because of the great diversity of releases or waivers permitted by various state mechanics lien laws. Forms for such purposes may be available from local contractors' associations or may be written with the assistance of legal counsel.

EXECUTING THE DOCUMENT

The Notary Public should administer a sworn oath to the Contractor referencing the written statements appearing on AIA Document G706, and should duly sign and seal this document containing the Contractor's signature. G706 should be signed by the Contractor or the Contractor's authorized representative.

**CONSENT OF SURETY
TO FINAL PAYMENT**

AIA Document G707

Bond No. SU 1145476

OWNER	☐
ARCHITECT	☐
CONTRACTOR	☐
SURETY	☒
OTHER	☐

TO OWNER:

(Name and address)

City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403-1898

ARCHITECT'S PROJECT NO.:

CONTRACT FOR: Same as Below

PROJECT:

(Name and address)

CONTRACT DATED:

Comprehensive Sewer Improvements- Phase V

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

Arch Insurance Company
Harborside 3, 210 Hudson Street Suite 300
Jersey City, NJ 07311-1107

, SURETY,

on bond of

(Insert name and address of Contractor)

C.B. Developers, Inc.
1716 Evelyn Gandy Parkway, Suite 40
Hattiesburg, MS 39401

, CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety of
any of its obligations to

(Insert name and address of Owner)

City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403-1898

as set forth in said Surety's bond.



IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date: December 4, 2019

(Insert in writing the month followed by the numeric date and year.)

Arch Insurance Company

(Surety)

By:

(Signature of authorized representative)

Brody Eric Buckley

Attorney-in-Fact

(Printed name and title)

Resident MS Agent Fisher Brown Bottrell Insurance, Inc.

Attest:

(Seal)

Wes Price
Wes Price

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for Note, Loan, Letter of Credit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Brody Eric Buckley

its true and lawful Attorney-in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations.

Surety Bond Number: SU 1145476

Principal: C.B. Developers, Inc.

Obligee: City of Hattiesburg

This authority does not permit the same obligation to be split into two or more bonds in order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

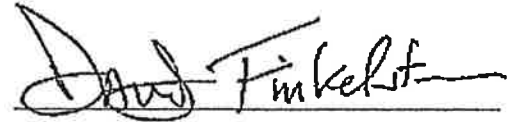
In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 28th day of September, 2017.

Attested and Certified

Arch Insurance Company



Patrick K. Nails, Secretary

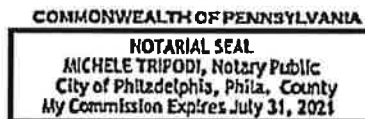



David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Michele Tripodi, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing Instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.




Michele Tripodi, Notary Public
My commission expires 07/31/2021

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated September 28, 2017 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this 4th day of December, 2019.



Patrick K. Nails, Secretary

This Power of Attorney limits the acts of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent herein stated.

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102



**COMPREHENSIVE SEWER IMPROVEMENTS PHASE V
CITY OF HATTIESBURG**

SUPPLEMENTAL AGREEMENT NO. 1 - FINAL

CITY OF HATTIESBURG, MISSISSIPPI

WHEREAS, We, C.B. Developers, Inc. Contractor and Arch Insurance Company, Surety entered into a contract with the City of Hattiesburg on the 19th Day of September, 2017 for the Comprehensive Sewer Improvements Phase V.

WHEREAS: An existing water main was located along Dogwood Drive that was inadequate size. The Owner desires to replace the existing water line with a 6-inch ductile iron to standardize the line during the construction process. The following items are added to the contract:

31.	6" Class 350 Ductile Iron Water Main	620 lf	\$ 27.88	\$17,285.60
32.	3-Way Hydrant w/Appurtenances (incl Tee Valve, Hydrant, Brass Tag, Pipe & other fittings)	1 ea	\$4,376.13	\$ 4,376.13
33.	Remove and Relocate Water Meters	6 ea	\$ 599.95	\$ 3,599.70
34.	Service Tubing	250 lf	\$ 5.10	\$ 1,275.00

WHEREAS: An existing subsurface drainage pipe was found to be failing along Dogwood Drive. The Owner desires to replace the existing subsurface drainage system including pipe and inlets. The following items are added to the contract:

35.	18" Reinforced Concrete Pipe, Class III Rubber Gasket	152 lf	\$47.96	\$ 7,289.92
36.	Drop Inlets	3 ea	\$3,237.14	\$ 9,711.42

WHEREAS: This agreement includes the modification of contract quantities to reflect the work completed by C.B. Developers, Inc. All original quantities shall be revised to match the final quantities listed in the attached list of Overruns and Underruns.

Original Contract Price = \$1,077,240.50
Revised per Supplemental Agreement # 1 = \$43,537.77
Revised per Overrun/Underrun = 97,561.21
Final Contract Amount = \$1,218,339.48

This agreement in no way modifies or changes the original contract of which it becomes a part, except as specifically stated herein.

NOW, THEREFORE, We, C.B. Developers, Inc. Contractor and Arch Insurance Company, Surety, hereby agree that said Supplemental Agreement is hereby made a part of the Original Contract to be performed under the specifications thereof, and that the Original Contract is in full force and effect, except insofar as it might be modified by this Supplement Agreement.

DATED, this 4th day of December, 2019

C.B. Developers, Inc.

Arch Insurance Company

By: _____

Contractor

By: _____

Surety

Brody Eric Buckley/Attorney-in-Fact
Resident MS Agent
Fisher Brown Bottrell Insurance, Inc.

Witness: _____

Witness: _____

Wes Price

City of Hattiesburg

By: _____

Owner

Witness: _____

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for Note, Loan, Letter of Credit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Brody Eric Buckley

its true and lawful Attorney-in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations.

Surety Bond Number: SU 1145476

Principal: C.B. Developers, Inc.

Obligee: City of Hattiesburg

This authority does not permit the same obligation to be split into two or more bonds in order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

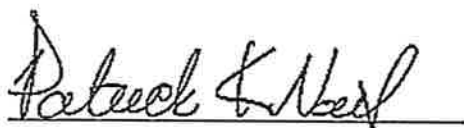
This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

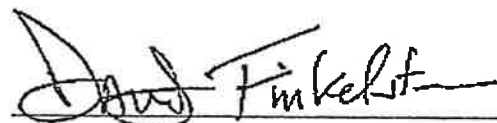
In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 28th day of September, 2017.

Attested and Certified

Arch Insurance Company



Patrick K. Nails, Secretary

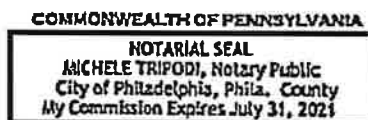



David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Michele Tripodi, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

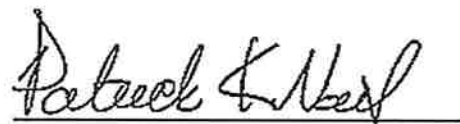



Michele Tripodi, Notary Public
My commission expires 07/31/2021

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated September 28, 2017 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this 4th day of December, 2019.



Patrick K. Nails, Secretary

This Power of Attorney limits the acts of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent herein stated.

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102



OVERRUNS UNDERRUNS
PROJECT: COMPREHENSIVE SEWER IMPROVEMENTS - PHASE V
CONTRACTOR: C.B. DEVELOPERS, INC.

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
SITE 1: DOGWOOD DRIVE AREA									
	Sewer Pipe Items								
1	4" 160 PSI PVC Sanitary Sewer Force Main (All Depths)	Lin. Ft.	1,000	982		18	\$ 7.84		\$ 141.12
	Reason: Quantity changed to reflect existing conditions.								
2	8" SDR 26 PVC Sewer Pipe (0'-6')	Lin. Ft.	1,098	966		132	\$ 24.16		\$ 3,189.12
	Reason: Quantity changed to reflect existing conditions.								
3	8" SDR 26 PVC Sewer Pipe (6'-8')	Lin. Ft.	601	707	106		\$ 26.56	\$ 2,815.36	
	Reason: Quantity changed to reflect existing conditions.								
4	8" SDR 26 PVC Sewer Pipe (8'-10')	Lin. Ft.	123	146	23		\$ 38.55	\$ 886.65	
	Reason: Quantity changed to reflect existing conditions.								
5	8" SDR 26 PVC Sewer Pipe (10'-12')	Lin. Ft.	101	48		53	\$ 43.34		\$ 2,297.02
	Reason: Quantity changed to reflect existing conditions.								
6	8" SDR 26 PVC Sewer Pipe (12'-14')	Lin. Ft.	135	55		80	\$ 48.14		\$ 3,851.20
	Reason: Quantity changed to reflect existing conditions.								
7	Air Release and Vacuum Valve Assembly (Including Precast Concrete Manhole)	Each	1	1			\$ 4,189.24		
	Reason: No Change								
	Manhole Items								
8	48" Precast Concrete Sewer Manhole (0'-6')	Each	3	2		1	\$ 2,689.82		\$ 2,689.82
	Reason: Quantity changed to reflect existing conditions.								
9	48" Precast Concrete Sewer Manhole (6'-8')	Each	8	7		1	\$ 3,176.78		\$ 3,176.78
	Reason: Quantity changed to reflect existing conditions.								

OVERRUNS UNDERRUNS
PROJECT: COMPREHENSIVE SEWER IMPROVEMENTS - PHASE V
CONTRACTOR: C.B. DEVELOPERS, INC.

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
10	48" Precast Concrete Sewer Manhole (8'-10')	Each	1	1			\$ 3,658.87		
	Reason: No Change								
11	48" Precast Concrete Sewer Manhole (10'-12')	Each	1	0		1	\$ 4,190.30		\$ 4,190.30
	Reason: Quantity changed to reflect existing conditions.								
12	48" Precast Concrete Sewer Manhole (12'-14')	Each	1	1			\$ 4,382.73		
	Reason: No Change								
	Sewer Service Items								
13	6" SDR 26 PVC Sewer Pipe for Services (All Depths)	Lin. Ft.	942	898		44	\$ 10.60		\$ 466.40
	Reason: Quantity changed to reflect existing conditions.								
14	8"x8"x6" PVC Tee	Each	8	9	1		\$ 323.75	\$ 323.75	
	Reason: Quantity changed to reflect existing conditions.								
15	6" PVC Cleanout	Each	8	15	7		\$ 359.74	\$ 2,518.18	
	Reason: Quantity changed to reflect existing conditions.								
	Lift Station Items								
16	Lift Station Incl Clearing and Grubbing, Borrow Material, Crushed Aggregate, Concrete Wet Well, Pumps, Electrical, Disconnect, Valve Pit, Guages, Service Pole, Meter Box, Lifting Chain or Cable, Gude Rail Assembly, Chain Link Fencing, Etc.	LS	1	1			\$ 207,236.80		
	Reason: No Change								
	Miscellaneous Construction Items								
17	Abandonment of Septic Tanks	Each	7	9	2		\$ 359.68	\$ 719.36	
	Reason: Quantity changed to reflect existing conditions.								
18	Drop Manhole Assembly (All Depths)	Each	3	3			\$ 869.23		
	Reason: No Change								
19	Water Service Repair (Including Service Tubing, Fittings, Corp Stop, Curb Stop, Tapping Saddle, Etc)	Each	4	0		4	\$ 599.95		\$ 2,399.80
	Reason: Quantity changed to reflect existing conditions.								

OVERRUNS UNDERRUNS
PROJECT: COMPREHENSIVE SEWER IMPROVEMENTS - PHASE V
CONTRACTOR: C.B. DEVELOPERS, INC.

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
20	Crushed Aggregate (Size 825)	Ton	612	901	289		\$ 44.96	\$ 12,993.44	
	Reason: Quantity changed to reflect existing conditions.								
21	Select Fill Material (Class 9, Group C), LVM	Cu. Yd.	2,495	128		2367	\$ 10.79		\$ 25,539.93
	Reason: Quantity changed to reflect existing conditions.								
22	Hot Mix Asphalt, ST, 9.5mm	Tons	208	388	180		\$ 167.85	\$ 30,213.00	
	Reason: Quantity changed to reflect existing conditions.								
23	Concrete Pavement Repair (All Depths)	Sq. Yd.	57	40		17	\$ 59.95		\$ 1,019.15
	Reason: Quantity changed to reflect existing conditions.								
24	Removal of Cross Drains (All Types and Sizes)	Lin. Ft.	16	72	56		\$ 11.99	\$ 671.44	
	Reason: Quantity changed to reflect existing conditions.								
25	30" Reinforced Concrete Pipe, Class III, Rubber Gaskets	Lin. Ft.	16	0		16	\$ 95.92		\$ 1,534.72
	Reason: Quantity changed to reflect existing conditions.								
26	Class "B" Concrete, Minor Structures	Cu. Yd.	5	6	1		\$ 2,353.82	\$ 2,353.82	
	Reason: Quantity changed to reflect existing conditions.								
27	Grassing	Lump Sum	1	1			\$ 3,896.56		
	Reason: No Change								
28	Erosion Control	Lump Sum	1	1			\$ 6,594.17		
	Reason: No Change								
29	Mobilization	Lump Sum	1	1			\$ 44,960.26		
	Reason: No Change								

OVERRUNS UNDERRUNS
PROJECT: COMPREHENSIVE SEWER IMPROVEMENTS - PHASE V
CONTRACTOR: C.B. DEVELOPERS, INC.

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
30	Maintenance of Traffic	Lump Sum	1	1			\$ 29,973.50		
	Reason: No Change								
	Added Per Supplemental Agreement No. 1								
31	6" Class 350 DI Water Pipe	Lin. Ft.	620	620			\$ 27.88		
	Reason: Supplemental Agreement No. 1								
32	3 Way Hydrant w/ Appurtences (Incl. Tee, Valve, Hydrant, Brass Tag, Pipe, & other fittings)	Each	1	1			\$ 4,376.13		
	Reason: Supplemental Agreement No. 1								
33	Remove and Relocate existing Water Meters	Each	6	6			\$ 599.95		
	Reason: Supplemental Agreement No. 1								
34	Service Tubing (All Size)	Lin. Ft.	250	250			\$ 5.10		
	Reason: Supplemental Agreement No. 1								
35	18" Reinforced Concrete Pipe, Class III, Rubber Gasket	Lin. Ft.	152	152			\$ 47.96		
	Reason: Supplemental Agreement No. 1								
36	Drop Inlets	Each	3	3			\$ 3,237.14		
	Reason: Supplemental Agreement No. 1								
SITE 2-3-CORRINE STREET, EMERALD LANE & DUKE AVENUE									
	Sewer Pipe Items								
1	8" SDR 26 PVC Sewer Pipe (6'-8')	Lin. Ft.	243	448	205		\$ 24.46	\$ 5,014.30	
	Reason: Quantity changed to reflect existing conditions.								
2	8" SDR 26 PVC Sewer Pipe (8'-10')	Lin. Ft.	635	865	230		\$ 26.56	\$ 6,108.80	
	Reason: Quantity changed to reflect existing conditions.								
3	8" SDR 26 PVC Sewer Pipe (10'-12')	Lin. Ft.	125	115		10	\$ 28.95		\$ 289.50
	Reason: Quantity changed to reflect existing conditions.								

OVERRUNS UNDERRUNS
 PROJECT: COMPREHENSIVE SEWER IMPROVEMENTS - PHASE V
 CONTRACTOR: C.B. DEVELOPERS, INC.

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
4	8" SDR 26 PVC Sewer Pipe (12'-14')	Lin. Ft.	137	145	8		\$ 31.35	\$ 250.80	
	Reason: Quantity changed to reflect existing conditions.								
5	8" SDR 26 PVC Sewer Pipe (14'-16')	Lin. Ft.	102	102			\$ 36.15		
	Reason: Quantity changed to reflect existing conditions.								
6	8" SDR 26 PVC Sewer Pipe (16'-18')	Lin. Ft.	187	327	140		\$ 40.94	\$ 5,731.60	
	Reason: Quantity changed to reflect existing conditions.								
7	8" SDR 11 HDPE Sewer Service Bore	Lin. Ft.	275	268		7	\$ 59.47		\$ 416.29
	Reason: Quantity changed to reflect existing conditions.								
8	15" SDR 26 PVC Sewer Pipe (6'-8')	Lin. Ft.	733	647		86	\$ 38.50		\$ 3,311.00
	Reason: Quantity changed to reflect existing conditions.								
9	15" SDR 26 PVC Sewer Pipe (8'-10')	Lin. Ft.	336	315		21	\$ 43.29		\$ 909.09
	Reason: Quantity changed to reflect existing conditions.								
10	15" SDR 26 PVC Sewer Pipe (10'-12')	Lin. Ft.	225	266	41		\$ 48.09	\$ 1,971.69	
	Reason: Quantity changed to reflect existing conditions.								
11	24" Steel Casing (Bored)	Lin. Ft.	60	30		30	\$ 213.46		\$ 6,403.80
	Reason: Quantity changed to reflect existing conditions.								
	Manhole Items								
12	48" Precast Concrete Sewer Manhole (8'-10')	Each	3	4	1		\$ 3,179.29	\$ 3,179.29	
	Reason: Quantity changed to reflect existing conditions.								

OVERRUNS UNDERRUNS
PROJECT: COMPREHENSIVE SEWER IMPROVEMENTS - PHASE V
CONTRACTOR: C.B. DEVELOPERS, INC.

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
13	48" Precast Concrete Sewer Manhole (12'-14')	Each	1	1			\$ 3,663.36		
	Reason: No Change								
14	48" Precast Concrete Sewer Manhole (14'-16')	Each	1	1			\$ 4,675.87		
	Reason: No Change								
15	60" Precast Concrete Sewer Manhole (6'-8')	Each	3	2		1	\$ 4,615.92		\$ 4,615.92
	Reason: Quantity changed to reflect existing conditions.								
16	60" Precast Concrete Sewer Manhole (10'-12')	Each	2	3	1		\$ 4,991.79	\$ 4,991.79	
	Reason: Quantity changed to reflect existing conditions.								
17	Drop Manhole Assembly (All Depths)	Each	3	1		2	\$ 869.23		\$ 1,738.46
	Reason: Quantity changed to reflect existing conditions.								
18	Demolition and Removal of Existing Sewer Manhole	Each	8	8			\$ 1,498.68		
	Reason: No Change								
	Sewer Service Items								
19	6" SDR 26 PVC Sewer Pipe for Services (All Depths)	Lin. Ft.	270	846	576		\$ 10.56	\$ 6,082.56	
	Reason: Quantity changed to reflect existing conditions.								
20	8"x8"x6" PVC Tee	Each	3	15	12		\$ 323.75	\$ 3,885.00	
	Reason: Quantity changed to reflect existing conditions.								
21	Service Connection (Insert a Tee)	Each	6	17	11		\$ 585.08	\$ 6,435.88	
	Reason: Quantity changed to reflect existing conditions.								
22	6" PVC Cleanout	Each	9	32	23		\$ 370.47	\$ 8,520.81	
	Reason: Quantity changed to reflect existing conditions.								
	Miscellaneous Construction Items								
23	Water Service Repair (Including Service Tubing, Fittings, Corp Stop, Curb Stop, Tapping Saddle, Etc)	Each	8	11	3		\$ 669.01	\$ 2,007.03	
	Reason: Quantity changed to reflect existing conditions.								

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
24	Crushed Aggregate (Size 825)	Ton	1,387	1390.98	3.98		\$ 44.96	\$ 178.94	
	Reason: Quantity changed to reflect existing conditions.								
25	Select Fill Material (Class 9, Group C), LVM	Cu. Yd.	8,090	3332		4758	\$ 11.39		\$ 54,193.62
	Reason: Quantity changed to reflect existing conditions.								
26	Hot Mix Asphalt, ST, 9.5mm	Tons	530	1165	635		\$ 167.85	\$ 106,584.75	
	Reason: Additional Street Paving on Duke Avenue.								
27	Concrete Pavement Repair (All Depths)	Sq. Yd.	25	26	1		\$ 59.95	\$ 59.95	
	Reason: Quantity changed to reflect existing conditions.								
28	Removal of Cross Drains (All Types and Sizes)	Lin. Ft.	180	288	108		\$ 11.99	\$ 1,294.92	
	Reason: Quantity changed to reflect existing conditions.								
29	12" Reinforced Concrete Pipe, Class III, Rubber Gaskets	Lin. Ft.	24	0		24	\$ 39.57		\$ 949.68
	Reason: Quantity changed to reflect existing conditions.								
30	18" Reinforced Concrete Pipe, Class III, Rubber Gaskets	Lin. Ft.	64	168	104		\$ 43.16	\$ 4,488.64	
	Reason: Quantity changed to reflect existing conditions.								
31	21" Reinforced Concrete Pipe, Class III, Rubber Gaskets	Lin. Ft.	40	0		40	\$ 52.75		\$ 2,110.00
	Reason: Quantity changed to reflect existing conditions.								
32	24" Reinforced Concrete Pipe, Class III, Rubber Gaskets	Lin. Ft.	48	120	72		\$ 70.74	\$ 5,093.28	
	Reason: Quantity changed to reflect existing conditions.								
33	Class "B" Concrete, Minor Structures	Cu. Yd.	1	0		1	\$ 2,381.10		\$ 2,381.10
	Reason: Quantity changed to reflect existing conditions.								

OVERRUNS UNDERRUNS
PROJECT: COMPREHENSIVE SEWER IMPROVEMENTS - PHASE V
CONTRACTOR: C.B. DEVELOPERS, INC.

ITEM NO.	ITEM DESCRIPTION	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	OVERRUNS	UNDERRUNS	UNIT PRICE	INCREASE	DECREASE
34	Grassing	Lump Sum	1	1			\$ 3,896.56		
	Reason: No Change								
35	Erosion Control	Lump Sum	1	1			\$ 7,793.11		
	Reason: No Change								
36	Mobilization	Lump Sum	1	1			\$ 41,962.90		
	Reason: No Change								
37	Maintenance of Traffic	Lump Sum	1	1			\$ 29,973.50		
	Reason: No Change								
							\$ 225,375.03	\$	127,813.82
							PROJECT INCREASE	\$	97,561.21
							Original Contract Amount	\$	1,077,240.50
							Overrun	\$	97,561.21
							Supplemental Agreement No. 1	\$	43,537.77
							Final Contract Amount	\$	1,218,339.48

Contractor's Final Application For Payment No. 12Final

		Application Period: Beginning: 12/1/2018 Ending: 4/30/2018	Application Date: 4-Dec-19
To (Owner): CITY OF HATTIESBURG	From (Contractor): C.B. DEVELOPERS, INC.		Via (Engineer): SHOWS, DEARMAN & WAITS, INC.
Project: COMPREHENSIVE SEWER PHASE 5	Contract:		
Owner's Contract No.:	Contractor's Project No.:		Engineer's Project No.:

Change Order Summary

Approved Change Orders

Number	Additions	Deductions
TOTALS	\$ -	\$ -
NET CHANGE BY CHANGE ORDERS	\$ -	

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: Date: 12/4/2019

1. ORIGINAL CONTRACT PRICE	\$ 1,077,240.50
2. Net change by Change Orders	\$ -
3. CURRENT CONTRACT PRICE (LINE 1 + 2)	\$ 1,077,240.50
4. TOTAL COMPLETED AND STORED TO DATE (Column F on Progress Estimates)	\$ 1,218,339.48
5. RETAINAGE:	
a. 5.0 % x Work Completed	\$ -
b. 5.0% x Stored Material	\$ -
c. Total Retainage (line 5a + line 5b)	\$ -
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c)	\$ 1,218,339.48
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	\$ 1,108,555.59
8. AMOUNT DUE THIS APPLICATION	\$ 109,783.89
9. BALANCE TO FINISH, PLUS RETAINAGE	
(Column G on Progress Estimate + Line 5 above)	\$ (97,561.21)

Payment of:	\$109,783.89	
	(Line 8 or other - attach explanation of other amount)	
Is recommended by:	 (Engineer)	12-16-19 (Date)
Payment of:	\$109,783.89	
	(Line 8 or other - attach explanation of other amount)	
Is approved by:	_____ (Owner)	_____ (Date)
Is approved by:	_____ (Owner)	_____ (Date)
Approved by:	_____ (Funding Agency, if applicable)	_____ (Date)

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):	COMPREHENSIVE SEWER PHASE 5					Application Number: 11					
Application Period:		12/1/2018 TO 4/30/2018		Application Date: 4-Dec-19							
	A	Bid	Quantity	Unit Price	B	C	D	E	F		G
Pay Item	Item Description				Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (B - F)
	SITE 1-DOGWOOD DRIVE										
1	4" 160 PSI PVC SANITARY SEWER FORCE MAIN (ALL DEPTHS)	1000.0	\$	7.84	\$ 7,840.00	982	\$ 7,698.88	\$0.00	\$ 7,698.88	98%	\$ 141.12
2	8" SDR 26 PVC SEWER PIPE (0'-6')	1098.0	\$	24.16	\$ 26,527.68	966	\$ 23,338.56	\$0.00	\$ 23,338.56	88%	\$ 3,189.12
3	8" SDR 26 PVC SEWER PIPE (6'-8')	601.0	\$	26.56	\$ 15,962.56	707	\$ 18,777.92	\$0.00	\$ 18,777.92	118%	\$ (2,815.36)
4	8" SDR 26 PVC SEWER PIPE (8'-10')	123.0	\$	38.55	\$ 4,741.65	146	\$ 5,628.30	\$0.00	\$ 5,628.30	119%	\$ (886.65)
5	8" SDR 26 PVC SEWER PIPE (10'-12')	101.0	\$	43.34	\$ 4,377.34	48	\$ 2,080.32	\$0.00	\$ 2,080.32	48%	\$ 2,297.02
6	8" SDR 26 PVC SEWER PIPE (12'-14')	135.0	\$	48.14	\$ 6,498.90	55	\$ 2,647.70	\$0.00	\$ 2,647.70	41%	\$ 3,851.20
7	AIR RELEASE AND VACUUM VALVE ASSEMBLY (INCLUDING PR	1.0	\$	4,189.24	\$ 4,189.24	1	\$ 4,189.24	\$0.00	\$ 4,189.24	100%	\$ -
	MANHOLE ITEMS										
8	48" PRECAST CONCRETE SEWER MANHOLE (0'-6')	3.0	\$	2,689.82	\$ 8,069.46	2	\$ 5,379.64	\$0.00	\$ 5,379.64	67%	\$ 2,689.82
9	48" PRECAST CONCRETE SEWER MANHOLE (6'-8')	8.0	\$	3,176.78	\$ 25,414.24	7	\$ 22,237.46	\$0.00	\$ 22,237.46	88%	\$ 3,176.78
10	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')	1.0	\$	3,658.87	\$ 3,658.87	1	\$ 3,658.87	\$0.00	\$ 3,658.87	100%	\$ -
11	48" PRECAST CONCRETE SEWER MANHOLE (10'-12')	1.0	\$	4,190.30	\$ 4,190.30	-	\$ -	\$0.00	\$ -	0%	\$ 4,190.30
12	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')	1.0	\$	4,382.73	\$ 4,382.73	1	\$ 4,382.73	\$0.00	\$ 4,382.73	100%	\$ -
	SEWER SERVICE ITEMS										
13	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)	942.0	\$	10.60	\$ 9,985.20	898	\$ 9,518.80	\$0.00	\$ 9,518.80	95%	\$ 466.40
14	8" X 8" X 6" PVC TEE	8.0	\$	323.75	\$ 2,590.00	9	\$ 2,913.75	\$0.00	\$ 2,913.75	113%	\$ (323.75)
15	6" PVC CLEANOUT	8.0	\$	359.74	\$ 2,877.92	15	\$ 5,396.10	\$0.00	\$ 5,396.10	188%	\$ (2,518.18)
	LIFT STATION ITEMS										
16	LIFT STATION INCL CLEARING AND GRUBBING, BORROW MAT	1.0	\$	207,236.80	\$ 207,236.80	1	\$ 207,236.80	\$0.00	\$ 207,236.80	100%	\$ -
	MISCELLANEOUS CONSTRUCTION ITEMS										
17	ABANDONMENT OF SEPTIC TANKS	7.0	\$	359.68	\$ 2,517.76	9	\$ 3,237.12	\$0.00	\$ 3,237.12	129%	\$ (719.36)
18	DROP MANHOLE ASSEMBLY (ALL DEPTHS)	3.0	\$	869.23	\$ 2,607.69	3	\$ 2,607.69	\$0.00	\$ 2,607.69	100%	\$ -
19	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTING	4.0	\$	599.95	\$ 2,399.80	-	\$ -	\$0.00	\$ -	0%	\$ 2,399.80
20	CRUSHED AGGREGATE (SIZE 825)	612.0	\$	44.96	\$ 27,515.52	901	\$ 40,508.96	\$0.00	\$ 40,508.96	147%	\$ (12,993.44)
	TOTALS				\$ 373,583.66		\$ 371,438.84	\$0.00	\$ 371,438.84		\$ 2,144.82

EJCDC No. C-620 (2002 Edition)

1/11/1900

Prepared by the Engineers' Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.

Progress Estimate

Contractor's Application

For (contract):	COMPREHENSIVE SEWER PHASE 5				Application Number: 11					
Application Period:	12/1/2018	TO	4/30/2018		Application Date: 4-Dec-19					
	A			B	C	D	E	F		G
Pay Item	Item Description	Bid Quantity	Unit Price	Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (B - F)
	Subtotal from Previous Page			\$ 373,583.66		\$ 371,438.84	\$0.00	\$ 371,438.84		\$ 2,144.82
21	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	2495.0	\$ 10.79	\$ 26,921.05	128	\$ 1,381.12	\$0.00	\$ 1,381.12	5%	\$ 25,539.93
22	HOT MIX ASPHALT, ST, 9.5MM	208.0	\$ 167.85	\$ 34,912.80	388	\$ 65,125.80	\$0.00	\$ 65,125.80	187%	\$ (30,213.00)
23	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	57.0	\$ 59.95	\$ 3,417.15	40	\$ 2,398.00	\$0.00	\$ 2,398.00	70%	\$ 1,019.15
24	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)	16.0	\$ 11.99	\$ 191.84	72	\$ 863.28	\$0.00	\$ 863.28	450%	\$ (671.44)
25	30" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	16.0	\$ 95.92	\$ 1,534.72	-	\$ -	\$0.00	\$ -	0%	\$ 1,534.72
26	CLASS "B" CONCRETE, MINOR STRUCTURES	5.0	\$ 2,353.82	\$ 11,769.10	6	\$ 14,122.92	\$0.00	\$ 14,122.92	120%	\$ (2,353.82)
27	GRASSING	1.0	\$ 3,896.56	\$ 3,896.56	1	\$ 3,896.56	\$0.00	\$ 3,896.56	100%	\$ -
28	EROSION CONTROL	1.0	\$ 6,594.17	\$ 6,594.17	1	\$ 6,594.17	\$0.00	\$ 6,594.17	100%	\$ -
29	MOBILIZATION	1.0	\$ 44,960.26	\$ 44,960.26	1	\$ 44,960.26	\$0.00	\$ 44,960.26	100%	\$ -
30	MAINTENANCE OF TRAFFIC	1.0	\$ 29,973.50	\$ 29,973.50	1	\$ 29,973.50	\$0.00	\$ 29,973.50	100%	\$ -
	SITE 2-CORRINE STREET, EMERALD LANE & DUKE AVENUE									
1	8" SDR 26 PVC SEWER PIPE (6'-8')	243.0	\$ 24.46	\$ 5,943.78	448	\$ 10,958.08	\$0.00	\$ 10,958.08	184%	\$ (5,014.30)
2	8" SDR 26 PVC SEWER PIPE (8'-10')	635.0	\$ 26.56	\$ 16,865.60	865	\$ 22,974.40	\$0.00	\$ 22,974.40	136%	\$ (6,108.80)
3	8" SDR 26 PVC SEWER PIPE (10'-12')	125.0	\$ 28.95	\$ 3,618.75	115	\$ 3,329.25	\$0.00	\$ 3,329.25	92%	\$ 289.50
4	8" SDR 26 PVC SEWER PIPE (12'-14')	137.0	\$ 31.35	\$ 4,294.95	145	\$ 4,545.75	\$0.00	\$ 4,545.75	106%	\$ (250.80)
5	8" SDR 26 PVC SEWER PIPE (14'-16')	102.0	\$ 36.15	\$ 3,687.30	102	\$ 3,687.30	\$0.00	\$ 3,687.30	100%	\$ -
6	8" SDR 26 PVC SEWER PIPE (16'-18')	187.0	\$ 40.94	\$ 7,655.78	327	\$ 13,387.38	\$0.00	\$ 13,387.38	175%	\$ (5,731.60)
7	8" SDR 11 HDPE SEWER SERVICE BORE	275.0	\$ 59.47	\$ 16,354.25	268	\$ 15,937.96	\$0.00	\$ 15,937.96	97%	\$ 416.29
8	15" SDR 26 PVC SEWER PIPE (6'-8')	733.0	\$ 38.50	\$ 28,220.50	647	\$ 24,909.50	\$0.00	\$ 24,909.50	88%	\$ 3,311.00
9	15" SDR 26 PVC SEWER PIPE (8'-10')	336.0	\$ 43.29	\$ 14,545.44	315	\$ 13,636.35	\$0.00	\$ 13,636.35	94%	\$ 909.09
10	15" SDR 26 PVC SEWER PIPE (10'-12')	225.0	\$ 48.09	\$ 10,820.25	266	\$ 12,791.94	\$0.00	\$ 12,791.94	118%	\$ (1,971.69)
11	24" STEEL CASING (BORED)	60.0	\$ 213.46	\$ 12,807.60	30	\$ 6,403.80	\$0.00	\$ 6,403.80	50%	\$ 6,403.80
	MANHOLE ITEMS									
12	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')	3.0	\$ 3,179.29	\$ 9,537.87	4	\$ 12,717.16	\$0.00	\$ 12,717.16	133%	\$ (3,179.29)
13	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')	1.0	\$ 3,663.36	\$ 3,663.36	1	\$ 3,663.36	\$0.00	\$ 3,663.36	100%	\$ -
	TOTALS			\$ 675,770.24		\$ 689,696.68	\$0.00	\$ 689,696.68		\$ (13,926.44)

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Progress Estimate

Contractor's Application

For (contract):	COMPREHENSIVE SEWER PHASE 5				Application Number:	11				
Application Period:	12/1/2018	TO	4/30/2018		Application Date:	4-Dec-19				
	A			B	C	D	E	F		G
Pay Item	Item Description	Bid Quantity	Unit Price	Bid Value	Estimated Quantity Installed	Value	Materials Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F)	Balance to Finish (G - F)
	Subtotal from Previous Page			\$ 675,770.24		\$ 689,696.68	\$0.00	\$ 689,696.68		\$ (13,926.44)
14	48" PRECAST CONCRETE SEWER MANHOLE (14'-16')	1.0	\$ 4,675.87	\$ 4,675.87	1	\$ 4,675.87	\$0.00	\$ 4,675.87	100%	\$ -
15	60" PRECAST CONCRETE SEWER MANHOLE (6'-8')	3.0	\$ 4,615.92	\$ 13,847.76	2	\$ 9,231.84	\$0.00	\$ 9,231.84	67%	\$ 4,615.92
16	60" PRECAST CONCRETE SEWER MANHOLE (10'-12')	2.0	\$ 4,991.79	\$ 9,983.58	3	\$ 14,975.37	\$0.00	\$ 14,975.37	150%	\$ (4,991.79)
17	DROP MANHOLE ASSEMBLY (ALL DEPTHS)	3.0	\$ 869.23	\$ 2,607.69	1	\$ 869.23	\$0.00	\$ 869.23	33%	\$ 1,738.46
18	DEMOLITION AND REMOVAL OF EXISTING SEWER MANHOLE	8.0	\$ 1,498.68	\$ 11,989.44	8	\$ 11,989.44	\$0.00	\$ 11,989.44	100%	\$ -
	SEWER SERVICE ITEMS									
19	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)	270.0	\$ 10.56	\$ 2,851.20	846	\$ 8,933.76	\$0.00	\$ 8,933.76	313%	\$ (6,082.56)
20	8" X 8" X 6" PVC TEE	3.0	\$ 323.75	\$ 971.25	15	\$ 4,856.25	\$0.00	\$ 4,856.25	500%	\$ (3,885.00)
21	SERVICE CONNECTION (INSERT A TEE)	6.0	\$ 585.08	\$ 3,510.48	17	\$ 9,946.36	\$0.00	\$ 9,946.36	283%	\$ (6,435.88)
22	6" PVC CLEANOUT	9.0	\$ 370.47	\$ 3,334.23	32	\$ 11,855.04	\$0.00	\$ 11,855.04	356%	\$ (8,520.81)
	MISCELLANEOUS CONSTRUCTION ITEMS									
23	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTING)	8.0	\$ 669.01	\$ 5,352.08	11	\$ 7,359.11	\$0.00	\$ 7,359.11	138%	\$ (2,007.03)
24	CRUSHED AGGREGATE (SIZE 825)	1387.0	\$ 44.96	\$ 62,359.52	1,390.98	\$ 62,538.46	\$0.00	\$ 62,538.46	100%	\$ (178.94)
25	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM	8090.0	\$ 11.39	\$ 92,145.10	3,332	\$ 37,951.48	\$0.00	\$ 37,951.48	41%	\$ 54,193.62
26	HOT MIX ASPHALT, ST, 9.5MM	530.0	\$ 167.85	\$ 88,960.50	1,165	\$ 195,545.25	\$0.00	\$ 195,545.25	220%	\$ (106,584.75)
27	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)	25.0	\$ 59.95	\$ 1,498.75	26	\$ 1,558.70	\$0.00	\$ 1,558.70	104%	\$ (59.95)
28	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)	180.0	\$ 11.99	\$ 2,158.20	288	\$ 3,453.12	\$0.00	\$ 3,453.12	160%	\$ (1,294.92)
29	12" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	24.0	\$ 39.57	\$ 949.68	-	\$ -	\$0.00	\$ -	0%	\$ 949.68
30	18" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	64.0	\$ 43.16	\$ 2,762.24	168	\$ 7,250.88	\$0.00	\$ 7,250.88	263%	\$ (4,488.64)
31	21" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	40.0	\$ 52.75	\$ 2,110.00	-	\$ -	\$0.00	\$ -	0%	\$ 2,110.00
32	24" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	48.0	\$ 70.74	\$ 3,395.52	120	\$ 8,488.80	\$0.00	\$ 8,488.80	250%	\$ (5,093.28)
33	CLASS "B" CONCRETE, MINOR STRUCTURES	1.0	\$ 2,381.10	\$ 2,381.10	-	\$ -	\$0.00	\$ -	0%	\$ 2,381.10
34	GRASSING	1.0	\$ 3,896.56	\$ 3,896.56	1	\$ 3,896.56	\$0.00	\$ 3,896.56	100%	\$ -
35	EROSION CONTROL	1.0	\$ 7,793.11	\$ 7,793.11	1	\$ 7,793.11	\$0.00	\$ 7,793.11	100%	\$ -
36	MOBILIZATION	1.0	\$ 41,962.90	\$ 41,962.90	1.00	\$ 41,962.90	\$0.00	\$ 41,962.90	100%	\$ -
	TOTALS			\$ 1,047,267.00		\$ 1,144,828.21	\$0.00	\$ 1,144,828.21		\$ (97,561.21)

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Contractor's Application

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Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
	SITE 1-DOGWOOD DRIVE														0
1	4" 160 PSI PVC SANITARY SEWER FORCE MAIN (ALL DEPTHS)						745	237							982
2	8" SDR 26 PVC SEWER PIPE (0'-6')					423	543								966
3	8" SDR 26 PVC SEWER PIPE (6'-8')					151	184	372							707
4	8" SDR 26 PVC SEWER PIPE (8'-10')					96	50								146
5	8" SDR 26 PVC SEWER PIPE (10'-12')						48								48
6	8" SDR 26 PVC SEWER PIPE (12'-14')						55								55
7	AIR RELEASE AND VACUUM VALVE ASSEMBLY (INCLUDING PRECAST CONCRETE MANHOLE)							1							1
	MANHOLE ITEMS														0
8	48" PRECAST CONCRETE SEWER MANHOLE (0'-6')						1			1					2
9	48" PRECAST CONCRETE SEWER MANHOLE (6'-8')					3	2			2					7
10	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')					1									1
11	48" PRECAST CONCRETE SEWER MANHOLE (10'-12')														0
12	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')						1								1
	SEWER SERVICE ITEMS														0
13	6" SDR 26 PVC SEWER PIPE FOR SERVICES (ALL DEPTHS)					144	369	282		103					898
14	8" X 8" X 6" PVC TEE					2	4	2		1					9
15	6" PVC CLEANOUT					3	4	3		5					15
	LIFT STATION ITEMS														0
16	LIFT STATION INCL CLEARING AND GRUBBING, BORROW MATERIAL, CRUSHED AGGREGATE, CO					0.25	0.5		0.2	0.05					1
	MISCELLANEOUS CONSTRUCTION ITEMS														0
17	ABANDONMENT OF SEPTIC TANKS									5	4				9
18	DROP MANHOLE ASSEMBLY (ALL DEPTHS)									3					3
19	WATER SERVICE REPAIR (INCLUDING SERVICE TUBING, FITTINGS, CORP STOP, CURB STOP, TAPPING SADDLE, ETC.)														0
20	CRUSHED AGGREGATE (SIZE 825)					12.08		77.75	784.35		13.1		14.16		901

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
21	SELECT FILL MATERIAL (CLASS 9, GROUP C), LVM					56					72				128
22	HOT MIX ASPHALT, 5T, 9.5MM							88.98				299.15			388
23	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)										40.11				40
24	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)								72						72
25	30" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS														0
26	CLASS "B" CONCRETE, MINOR STRUCTURES											5.5			6
27	GRASSING										0.5				1
28	EROSION CONTROL						0.5				0.25				1
29	MOBILIZATION					1									1
30	MAINTENANCE OF TRAFFIC					0.5	0.25		0.25						1
	SITE 2-CORRINE STREET, EMERALD LANE & DUKE AVENUE														0
1	8" SDR 26 PVC SEWER PIPE (6'-8')			28	420										448
2	8" SDR 26 PVC SEWER PIPE (8'-10')			111	754										865
3	8" SDR 26 PVC SEWER PIPE (10'-12')			115											115
4	8" SDR 26 PVC SEWER PIPE (12'-14')			145											145
5	8" SDR 26 PVC SEWER PIPE (14'-16')			77	25										102
6	8" SDR 26 PVC SEWER PIPE (16'-18')			215	112										327
7	8" SDR 11 HDPE SEWER SERVICE BORE			268											268
8	15" SDR 26 PVC SEWER PIPE (6'-8')		647												647
9	15" SDR 26 PVC SEWER PIPE (8'-10')	200	115												315
10	15" SDR 26 PVC SEWER PIPE (10'-12')	98	168												266
11	24" STEEL CASING (BORED)		30												30
	MANHOLE ITEMS														0
12	48" PRECAST CONCRETE SEWER MANHOLE (8'-10')				4										4
13	48" PRECAST CONCRETE SEWER MANHOLE (12'-14')			1											1

Monthly Totals

		1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
	DESCRIPTION	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
14	48" PRECAST CONCRETE SEWER MANHOLE (14'-16')			1											1
15	60" PRECAST CONCRETE SEWER MANHOLE (6'-10')		2												2
16	60" PRECAST CONCRETE SEWER MANHOLE (6'-10')	2	1												3
17	DROP MANHOLE ASSEMBLY (ALL DEPTHS)		1												1
18	DEMOLITION AND REMOVAL OF EXISTING SEWER		5		3										8
	SEWER SERVICE ITEMS														0
19	6" SDR 26 PVC SEWER PIPE FOOT	17	236	333	260										846
20	8" X 8" X 6" PVC TEE			10	5										15
21	SERVICE CONNECTION (INSERT)	1	16												17
22	6" PVC CLEANOUT	1	13	11	7										32
	MISCELLANEOUS CONSTRUCTION ITEMS														0
23	WATER SERVICE REPAIR (INCLUDING SERVICE		3	8											11
24	CRUSHED AGGREGATE (SIZE 1/2")	111.39	538.72	451.21	232								57.66		1390.98
25	SELECT FILL MATERIAL (CLASS 9, GROUP C), LV		716	1762	854			64.05				-64.05			3332
26	HOT MIX ASPHALT, ST, 9.5MM							725.83			375.41	64.05			1165
27	CONCRETE PAVEMENT REPAIR (ALL DEPTHS)				26.08										26
28	REMOVAL OF CROSS DRAINS (ALL TYPES AND SIZES)		88		200										288
29	12" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS														0
30	18" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS	40	48		80										168
31	21" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS														0
32	24" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS				120										120
33	CLASS "B" CONCRETE, MINOR STRUCTURES		0												0
34	GRASSING										1				1
35	EROSION CONTROL				0.5		0.5								1
36	MOBILIZATION	0.5	0.5												1

Monthly Totals

	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
		Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed	Estimated Quantity Installed
37	MAINTENANCE OF TRAFFIC		0.5		0.5										1
SA31	6" CLASS 350 DUCTILE IRON WATER MAIN												620		620
SA32	3-WAY FIRE HYDRANT W/APPURT INCLE TEE AND VALVE												1		1
SA33	REMOVE, RELOCATE WATER METERS												6		6
SA34	SERVICE TUBING												250		250
SA35	18" REINFORCED CONCRETE PIPE, CLASS 3, RUBBER GASKETS												152		152
SA36	DROP INLETS												3		3
0		0													0
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Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, January 7, 2020

Re: Approve Joint-Funding Agreement for the period of October 1, 2019 to September 30, 2020 to continue the cooperative program between the U.S. Geological Survey (USGS) and the City of Hattiesburg for the operation and maintenance of the Bouie River Flood Monitoring Site at Glendale Avenue, and for hydrologic modeling and development of inundation maps for the Leaf River, with total cost to the City of \$6,500.00 and authorize the Mayor to execute in duplicate.
File Number: 2020-5
Minute Book #

Summary

Approve and Authorize execution of two originals of a Joint-Funding Agreement for the period of October 1, 2019 to September 30, 2020 to continue the cooperative program between the U.S. Geological Survey (USGS) and the City of Hattiesburg for the operation and maintenance of the Bouie River Flood Monitoring Site at Glendale Avenue, and for hydrologic modeling and development of inundation maps for the Leaf River, with total cost to the City of \$6,500.00.

Recommendation Statement

I recommend approval

Please place this on the January 7, 2020 City Council meeting for consideration.



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Lower Mississippi Gulf Water Science Center
Jackson Office
308 South Airport Rd.
Jackson, Mississippi 39208

December 9, 2019

Mr. Ronnie Perkins
Director of Public Works
City of Hattiesburg
200 Forrest Street
Hattiesburg, MS 39401

Dear Mr. Perkins:

Enclosed are two copies of a Joint-Funding Agreement for the period of October 1, 2019 to September 30, 2020 to continue the cooperative program between the U.S. Geological Survey (USGS) and the City of Hattiesburg. This agreement will provide funding for the operation and maintenance of a flood monitoring site on the Bouie River at Glendale Avenue. The Bouie River flood monitoring site will provide real-time river stage data via the USGS Web site during flood events and will be utilized by the National Weather Service to provide flood forecast information to local residents and emergency managers during future flood events. The operating costs for FY20 for this site was increased from \$10,550 to \$11,250, this will be shared by the City of Hattiesburg (\$6,500) and USGS (\$4,750).

Please sign and return one fully-executed original to Markeshia Watson, Administrative Specialist at **3535 S Sherwood Forest Blvd., Ste. 120, Baton Rouge, LA 70816**.

Federal law requires that we have a signed agreement before we start or continue work. Please return the signed agreement by **as soon as possible**. If, for any reason, the agreement cannot be signed and returned by the date shown above, please contact Michael Runner by phone number (601) 933-2941 or email msrunner@usgs.gov to make alternative arrangements.

This is a fixed cost agreement to be billed annually via Down Payment Request (automated Form DI-1040). Please allow 30-days from the end of the billing period for issuance of the bill. If you experience any problems with your invoice(s), please contact Markeshia Watson at phone number (225) 298-5481 Ext 3106 or email at mwatson@usgs.gov.

The results of all work performed under this agreement will be available for publication by the U.S. Geological Survey. We look forward to continuing this and future cooperative efforts in these mutually beneficial water resources studies.

Sincerely,

W. Scott Gain
Director, LMG Water Science Center

Enclosure
20MLJFAMSDA088 (2)

U.S. Department of the Interior
U.S. Geological Survey
Joint Funding Agreement
FOR
Water Resource Investigations

Customer #: 6000001885
Agreement #: 20MLJFAMSDA088
Project #: ML009Z5
TIN #: 64-6000432

Fixed Cost Agreement YES[X] NO[]

THIS AGREEMENT is entered into as of the October 1, 2019, by the U.S. GEOLOGICAL SURVEY, Lower Mississippi Gulf Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the City of Hattiesburg party of the second part.

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation funding for the operation and maintenance of a flood monitoring site on the Bouie River at Glendale Avenue. The Bouie River flood monitoring site will provide real-time river stage data via the USGS Web site during flood events and will be utilized by the National Weather Service to provide flood forecast information to local residents and emergency managers during future flood events, herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50, and 43 USC 50b.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) include In-Kind-Services in the amount of \$0.00

- (a) \$4,750 by the party of the first part during the period
October 1, 2019 to September 30, 2020
- (b) \$6,500 by the party of the second part during the period
October 1, 2019 to September 30, 2020
- (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0

Description of the USGS regional/national program:

- (d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
- (e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.

3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.

4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.

6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.

8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties. The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (<https://www2.usgs.gov/fsp/>).

U.S. Department of the Interior
U.S. Geological Survey
Joint Funding Agreement
FOR
Water Resource Investigations

Customer #: 6000001885
Agreement #: 20MLJFAMSDA088
Project #: ML00925
TIN #: 64-6000432

9. Billing for this agreement will be rendered **annually**. Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

USGS Technical Point of Contact

Name: Michael Runner
Supervisory Hydrologist
Address: 308 S. Airport Road
Jackson, MS 39208
Telephone: (601) 933-2941
Fax: (601) 933-2901
Email: msrunner@usgs.gov

Customer Technical Point of Contact

Name: Jerald Little
P.E, City Engineer
Address: 200 Forrest Street
Hattiesburg, MS 39401
Telephone: (601) 545-4640
Fax:
Email: jlittle@hattiesburgms.com

USGS Billing Point of Contact

Name: Desvin Jones
Administrative Specialist
Address: 3535 South Sherwood Forest Blvd.
Suite 120
Baton Rouge, LA 70816
Telephone: (225) 298-5481 Ext 3114
Fax: (225) 298-5490
Email: ddjones@usgs.gov

Customer Billing Point of Contact

Name: Jerald Little
P.E, City Engineer
Address: 200 Forrest Street
Hattiesburg, MS 39401
Telephone: (601) 545-4640
Fax:
Email: jlittle@hattiesburgms.com

U.S. Geological Survey
United States
Department of Interior

City of Hattiesburg

Signature

By  Date: 12/09/2019
Name: W. Scott Gain
Title: Director, LMG Water Science Center

Signatures

By _____ Date: _____
Name:
Title:

By _____ Date: _____
Name:
Title:

By _____ Date: _____
Name:
Title:



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, January 7, 2020

Re: Approve Agreement with Landry Lewis Germany Architects, P.A. for services related to the roofing project at the former Hattiesburg American Building and authorize the Mayor to execute in duplicate.
File Number: 2020-6
Minute Book #

Summary

Approve agreement with Landry Lewis Germany Architects, P.A. for services related to the roofing project at the former Hattiesburg American Building; Authorized Mayor to execute in duplicate.

Recommendation Statement

I recommend approval of this agreement.

Please place this on the January 7, 2020 City Council meeting for consideration.



December 16, 2019

Re: Hattiesburg American ReRoof
Hattiesburg, Mississippi
CN 19-3754

City of Hattiesburg
200 Forrest Street
Hattiesburg, Mississippi 39401

Attn: Mayor Toby Barker

Dear Mayor Barker:

Enclosed please find two (2) copies of AIA Document B105 Standard Short Form of Agreement Between Owner and Architect on the above referenced project. After your review please execute both copies and keep one copy for your files. Return the remaining copy to this office for our files.

If you have any questions please feel free to contact the office.

Respectfully,

Nancy Templeton
Office Manager

/nat
enclosure

AIA® Document B105™ – 2017

Standard Short Form of Agreement Between Owner and Architect

AGREEMENT made as of the Eleventh day of December in the year Two Thousand Nineteen

(In words, indicate day, month and year.)

BETWEEN the Owner:

(Name, legal status, address and other information)

City of Hattiesburg
200 Forrest Street
Hattiesburg, Mississippi 39401

and the Architect:

(Name, legal status, address and other information)

Landry Lewis Germany Architects, P.A.
5211 Old Highway 11
Hattiesburg, Mississippi 39402
Telephone Number: 601-271-7711
Fax Number: 601-271-7712

for the following Project:

(Name, location and detailed description)

Hattiesburg American ReRoof
Hattiesburg, Mississippi
CN 19-3754

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The Owner and Architect agree as follows.

Init.

ARTICLE 1 ARCHITECT'S RESPONSIBILITIES

The Architect shall provide architectural services for the Project as described in this Agreement. The Architect shall perform its services consistent with the professional skill and care ordinarily provided by architects practicing in the same or similar locality under the same or similar circumstances. The Architect shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project. The Architect shall assist the Owner in determining consulting services required for the Project. The Architect's services include the following consulting services, if any:

N/A

During the Design Phase, the Architect shall review the Owner's scope of work, budget and schedule and reach an understanding with the Owner of the Project requirements. Based on the approved Project requirements, the Architect shall develop a design, which shall be set forth in drawings and other documents appropriate for the Project. Upon the Owner's approval of the design, the Architect shall prepare Construction Documents indicating requirements for construction of the Project and shall coordinate its services with any consulting services the Owner provides. The Architect shall assist the Owner in filing documents required for the approval of governmental authorities, in obtaining bids or proposals, and in awarding contracts for construction.

During the Construction Phase, the Architect shall act as the Owner's representative and provide administration of the Contract between the Owner and Contractor. The extent of the Architect's authority and responsibility during construction is described in AIA Document A105™-2017, Standard Short Form of Agreement Between Owner and Contractor. If the Owner and Contractor modify AIA Document A105-2017, those modifications shall not affect the Architect's services under this Agreement, unless the Owner and Architect amend this Agreement.

ARTICLE 2 OWNER'S RESPONSIBILITIES

The Owner shall provide full information about the objectives, schedule, constraints and existing conditions of the Project, and shall establish a budget that includes reasonable contingencies and meets the Project requirements. The Owner shall provide decisions and furnish required information as expeditiously as necessary for the orderly progress of the Project. The Architect shall be entitled to rely on the accuracy and completeness of the Owner's information. The Owner shall furnish consulting services not provided by the Architect, but required for the Project, such as surveying, which shall include property boundaries, topography, utilities, and wetlands information; geotechnical engineering; and environmental testing services. The Owner shall employ a Contractor, experienced in the type of Project to be constructed, to perform the construction Work and to provide price information.

ARTICLE 3 USE OF DOCUMENTS

Drawings, specifications and other documents prepared by the Architect are the Architect's Instruments of Service, and are for the Owner's use solely with respect to constructing the Project. The Architect shall retain all common law, statutory and other reserved rights, including the copyright. Upon completion of the construction of the Project, provided that the Owner substantially performs its obligations under this Agreement, the Architect grants to the Owner a license to use the Architect's Instruments of Service as a reference for maintaining, altering and adding to the Project. The Owner agrees to indemnify the Architect from all costs and expenses related to claims arising from the Owner's use of the Instruments of Service without retaining the Architect. When transmitting copyright-protected information for use on the Project, the transmitting party represents that it is either the copyright owner of the information, or has permission from the copyright owner to transmit the information for its use on the Project.

ARTICLE 4 TERMINATION, SUSPENSION OR ABANDONMENT

In the event of termination, suspension or abandonment of the Project by the Owner, the Architect shall be compensated for services performed. The Owner's failure to make payments in accordance with this Agreement shall be considered substantial nonperformance and sufficient cause for the Architect to suspend or terminate services. Either the Architect or the Owner may terminate this Agreement after giving no less than seven days' written notice if the Project is suspended for more than 90 days, or if the other party substantially fails to perform in accordance with the terms of this Agreement. Except as otherwise expressly provided herein, this Agreement shall terminate one year from the date of Substantial Completion.

ARTICLE 5 MISCELLANEOUS PROVISIONS

This Agreement shall be governed by the law of the place where the Project is located. Terms in this Agreement shall have the same meaning as those in AIA Document A105–2017, Standard Short Form of Agreement Between Owner and Contractor. Neither party to this Agreement shall assign the contract as a whole without written consent of the other.

Nothing contained in this Agreement shall create a contractual relationship with, or a cause of action in favor of, a third party against either the Owner or the Architect.

The Architect shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials or toxic substances in any form at the Project site.

ARTICLE 6 PAYMENTS AND COMPENSATION TO THE ARCHITECT

The Architect's Compensation shall be:

Flat Fee of \$6,500.00

The Owner shall pay the Architect an initial payment of Zero Dollars and Zero Cents (\$ 0.00) as a minimum payment under this Agreement. The initial payment shall be credited to the final invoice.

The Owner shall reimburse the Architect for expenses incurred in the interest of the Project, plus Zero percent (0 %).

Payments are due and payable upon receipt of the Architect's monthly invoice. Amounts unpaid Forty-five (45) days after the invoice date shall bear interest from the date payment is due at the rate of One and one-half percent (1.50 %) monthly , or in the absence thereof, at the legal rate prevailing at the principal place of business of the Architect.

At the request of the Owner, the Architect shall provide additional services not included in Article 1 for additional compensation. Such additional services may include, but not be limited to, providing or coordinating services of consultants not identified in Article 1; revisions due to changes in the Project scope, quality or budget, or due to Owner-requested changes in the approved design; evaluating changes in the Work and Contractors' requests for substitutions of materials or systems; providing services necessitated by the Contractor's failure to perform; and the extension of the Architect's Article 1 services beyond Twenty-four (24) months of the date of this Agreement through no fault of the Architect.

ARTICLE 7 OTHER PROVISIONS

(Insert descriptions of other services and modifications to the terms of this Agreement.)

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

Toby Barker, Mayor
(Printed name and title)

ARCHITECT (Signature)

Shane M. Germany, Secretary
(Printed name, title, and license number, if required)



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Kimberly Williams, Administrative Assistant

cc: Sherrocko Stewart, Fire Chief, Danny Wade, Assistant Fire Chief

Date: Tuesday, January 7, 2020

Re: Approve Memorandum of Understanding with Mississippi State Fire Academy (MSFA) and the Hattiesburg Fire Department to administer the Driver/Operator NFPA 1002: Pumper Field Course and authorize the Mayor to execute the same.
File Number: 2020-10
Minute Book #

Summary

Approve Memorandum of Understanding with Mississippi State Fire Academy (MSFA) and the Hattiesburg Fire Department to administer the Driver/Operator NFPA 1002: Pumper Field Course and authorize the Mayor to execute the same.

Recommendation Statement

Recommend approval of agreement with the Mississippi State Fire Academy for administering the Driver/Operator NFPA 1002: Pumper Field Course

Please place this on the January 7, 2020 City Council meeting for consideration.



STATE FIRE ACADEMY



Terry Wages
Executive Director

Division of Mississippi Department of Insurance
1 Fire Academy U.S.A.
Jackson, Mississippi 39208-9600
Phone: (601) 932-2444

Mike Chaney
Insurance Commissioner

Memorandum of Understanding (Rev. 7/2010)

This Memorandum of Understanding is entered into between the Mississippi State Fire Academy (MSFA), #1 Fire Academy USA, Jackson, MS 39208 (Rankin County Mississippi) and the following Customer:

Customer Name: Hattiesburg Fire Department
Address: 53 Academy Drive
City, State Zip: Hattiesburg, MS 39401
Phone: 601-545-4650
Fax: 601-545-4652
Federal ID Number: _____
Contact Person/Title: Chris Carr/Training Chief
Email Address: ccarr@hattiesburgms.com

1. **DATE(S) OF SERVICE:** January 13th – 24th, 2020

2. **LOCATION FOR SERVICE TO BE PERFORMED:** Hattiesburg Fire Department

3. **DESCRIPTION OF SERVICE TO BE PROVIDED TO CUSTOMER** Mississippi State Fire Academy (MSFA) shall provide the course **Driver/Operator NFPA 1002: Pumper – Field Course**. Academy Staff will provide the local course coordinator a complete package to manage the delivery of the course. **No books are included.** MSFA will administer all written and skill examinations.

Examination dates must be approved by MSFA personnel. All communications concerning test scores, student activities, etc. shall be between the MSFA coordinator and the local course manager. Certificate will be issued upon successful completion of course.

All documents and curriculum provided to you from the MSFA is the property of MSFA and cannot be duplicated for use outside of this delivery. **No books are included, and customer is wholly responsible for purchasing any required books through the textbook publisher.**

4. **NUMBER OF STUDENTS THIS MEMORANDUM OF UNDERSTANDING APPLIES TO:**

Minimum Number: 20 Maximum Number: 20

5. **SERVICE FEE:** Total Cost: **\$1,964.00** And/or Cost Per Student: **\$ 98.20/student**

Customer agrees to pay the service fee for the minimum number of seats being reserved herein, regardless of whether the minimum number of students actually attends the training.

If a Purchase Order is required for this service, indicate so and provide a purchase order number and/or copy of the purchase order:

Please note : If there is more than one department/organization entering this agreement for this course and the fee is split between the departments/organizations, the cost per student is based on the provided number of students. If the number of students from participating departments/organizations changes, the cost per student will change. However, the total of the fees will equal the total cost above and will be split between the participating departments/organizations.

If on Academy campus Monday through Thursday, are meals to be provided: ☐ Yes ☒ No If Yes, indicate which meals are provided:
N/A Breakfast served 6:30 a.m. to 7:15 a.m. N/A Lunch served 11:30 a.m. to 12:45 p.m.

If on Academy campus Monday through Thursday, are dorm beds requested: ☐ Yes N/A # of Beds ☒ No

Note: An invoice will be submitted to the customer upon completion of the service. If a purchase order number is required from your company, please fill in the appropriate blocks on this form. Payment for services is due within thirty (30) days of completion of services and receipt of invoice.

6. MODIFICATION, AMENDMENT, OR TERMINATION OF AGREEMENT:

Modifications, amendments, or termination of the Memorandum of Understanding may be made upon mutual agreement of both parties but must be in writing and signed by both parties. This Agreement may be terminated by the Academy upon written notice to the Customer should the Academy be subject to governmental budgetary cuts or if personnel cuts limit the amount of available manpower necessary to execute the professional service.

7. INSURANCE:

Customer represents that it will maintain workers' compensation insurance as prescribed by law that will insure to the benefit of the customer's personnel, as well as comprehensive general liability insurance. The Academy represents that it maintains workers compensation insurance for Academy personnel during the course of their official duties. Further, the Academy represents that as a state agency, the Mississippi Tort Claims Board views the organization as a sub-agency of the Mississippi Insurance Department. The Mississippi Insurance Department is certified by the Mississippi Tort Claims Board by participating in the Mississippi Tort Claims Fund as set forth in Chapter 46, Title 11, Mississippi Code 1972, as amended. This fund provides protection for tort claims against state employees and agencies subject to terms and limitations established by law while in the scope of their duties.

8. GOVERNING LAW:

This Agreement will be construed and governed in accordance with the laws of the State of Mississippi excluding its conflicts of laws provisions, and any litigation with respect thereto shall be brought in the courts of the State.

9. ACADEMY COURSE MATERIAL IS PROTECTED PROPERTY:

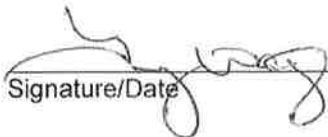
Academy course instructional material (lesson plans, power point presentations, handouts, skills check offs, etc.) shall be considered Protected Property belonging to the Academy. If part of this agreement is to provide the Customer this information for performance of this agreement, the Customer shall not copy, duplicate, transcribe, or any other form of duplication, in whole or in part, any course material submitted to them for use in fulfilling this Memorandum of Understanding, either directly or indirectly, for personal benefit, the benefit of another, or for future use. This statement of policy shall continue to be in effect whether or not the Agreement is terminated or has expired. Additionally, if any state property is utilized as part of this agreement, the Customer assures proper custody and care of the property (withstanding normal use and wear and tear).

10. ACKNOWLEDGEMENT OF MEMORANDUM OF UNDERSTANDING:

This constitutes the entire agreement of both parties with respect to the subject matter contained herein and supersedes and replaces any and all prior negotiations, understandings and agreements, written or oral, between the parties relating thereto. For the faithful performance of the terms of this agreement, the parties hereto have caused this Agreement to be executed by their undersigned authorized representatives.

PARTIES IN AGREEMENT:

Mississippi State Fire Academy
Authorized Personnel: Terry Wages, Executive Director
Authorized Personnel: Paul Ammerman, Office Director

 12/15/19
Signature/Date

Signature/Date

Academy Contact Regarding this Agreement:
Luke Smith/Instructor Advanced

Telephone: 601-420-1750
Email: lsmith@msfa.ma.gov

Customer: Hattiesburg Fire Department
Authorized Personnel: Chris Carr
Title: Training Chief
Authorized Personnel: ccarr@hattiesburgms.com

 12/20/19
Signature/Date

Optional Signature/Date:

If a Purchase Order is required for this service, indicate so and provide a purchase order number and/or copy of the purchase order:

Customer Invoicing/Billing Address:

Contact Name: _____

Contact Phone Number: _____

Please email to lyler@msfa.ms.gov, fax to 601-932-2819, or mail the original signature document to the Fire Academy at the following address:
Mississippi State Fire Academy
#1 Fire Academy USA Jackson MS 39208-9600



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ann Jones

cc:

Date: Tuesday, January 7, 2020

Re: Approve Agreement between City of Hattiesburg and Kone Inc. to provide elevator maintenance services at City Hall, Hattiesburg Cultural Center, Municipal Court, and the Pine Street Parking Garage for a two year period beginning January 1, 2020, and ending December 31, 2021, and authorize the Mayor to execute the same.
File Number: 2020-9
Minute Book #

Summary

Approve agreement between City of Hattiesburg and Kone Inc. to provide elevator maintenance services at City Hall, Hattiesburg Cultural Center, Municipal Court, and the Pine Street Parking Garage for a two year period beginning January 1, 2020, and ending December 31, 2021, and authorize Mayor to execute the same.

Recommendation Statement

I recommend the approval and execution of the agreement with Kone Inc. to provide elevator maintenance services at City Hall, Hattiesburg Cultural Center, Municipal Court, and the Civic Center Parking Garage.

Please place this on the January 7, 2020 City Council meeting for consideration.

Dedicated to People Flow™



August 6, 2019
City of Hattiesburg

KONE
Mobile
5252 2A Halls Mill Road
Mobile, AL
Phone:
Fax:
kerry.dupree@kone.com

Attn: Ann Jones

Re: KONE Care™ Maintenance Agreement
City of Hattiesburg

Dear Ann Jones,

Thank you for the opportunity to submit our KONE Care Maintenance Agreement for the vertical transportation equipment located at City of Hattiesburg.

KONE Care™ provides a detailed program that covers various components of your vertical transportation operation and is tailored to your specific facility, equipment, and needs. KONE's maintenance methods are utilized to maintain the safety, performance, and reliability of your equipment. Our trained service technicians follow proven performance procedures to help deliver a customized maintenance program, designed specifically to the profile for each piece of equipment.

As part of our advanced solutions, we also invite you to inquire about our KONE 24/7 Connected Services program, an innovative approach to connect your elevators and escalators for predictive monitoring services with IBM Watson. Please let me know if you would like to learn more about this service.

Upon your approval, please sign and return two (2) copies of the KONE Care Maintenance Agreement to our local branch office. One fully executed copy of the maintenance agreement will be returned to you for your files.

Once again, thank you for the opportunity to serve your vertical transportation needs. Please feel free to contact me with any questions at .

Respectfully,

Kerry DuPree
Service Sales Executive
KONE

Dedicated to People Flow™



Purchaser ("Purchaser"):
CITY OF HATTIESBURG
200 FORREST ST
HATTIESBURG, Mississippi 39401-3451

Service Location ("Premises"):
City of Hattiesburg

KONE Inc. ("KONE")
Mobile
5252 2A Halls Mill Road
Mobile, AL 36619

TENDER DATE: 08/06/2018

EFFECTIVE DATE: 09/15/2019

JAN 1, 2020

SCOPE OF SERVICES

1. EQUIPMENT DESCRIPTION ("Equipment")

Manufacturer	Type	Sub-Type	Count
KONE Municipal Court	Elevator	MRL	1
Montgomery City Hall	Elevator	Hydraulic	1
Otis Parking Garage	Elevator	Hydraulic	1
Motion Control Cultural Center	Elevator	Hydraulic	1

2. SERVICES

KONE will perform maintenance visits to examine, maintain, adjust, and lubricate the components listed below. In addition, KONE will repair or replace the components listed below, unless exclusion or limited scope language exists elsewhere in this Agreement. All other work related to the equipment is Purchaser's responsibility unless specifically noted elsewhere in this Agreement, or unless Purchaser has separately contracted with KONE for the work.

A. MRL Elevators

1. **Relay Logic Control System**
All control system components.
2. **Microprocessor Control System**
All control system components. System performance examinations will be conducted to ensure that dispatching and motion control systems are operating properly.
3. **Gearless Machines Components**
All MRL machine components.
4. **Hoistway and Pit Equipment**
All elevator control equipment and buffers.
5. **Rails and Guides**
Guide rails, guide shoe gibs, and rollers
6. **Ropes**
Hoist ropes, governor ropes, and compensation ropes.
7. **Wiring**
All elevator control wiring and all power wiring from the elevator equipment input terminals to the motor.
8. **Door Equipment**
Automatic door operators, hoistway and car door hangers, hoistway and car door contacts, door protective devices, hoistway door interlocks, door gibs, and auxiliary door closing devices.
9. **Manual Freight Door Equipment**
Switches, retiring cams, interlocks, guide shoes, sheaves, rollers, chains, sprockets, tensioning devices, and counter-balancing equipment.
10. **Power Freight Door Equipment**
Controller, relays, contactors, rectifiers, timers, resistors, solid state components, door motors, retiring cams, interlocks, switches, guide shoes, sheaves, rollers, chains, sprockets, and tensioning devices.
11. **Signals and Accessories**
Car operating panels, hall push button stations, hall lanterns, emergency lighting, car and hall position indicators, car operating panels, fireman's service equipment and all other signals, and accessory facilities furnished and installed as an integral part of the elevator equipment. Re-lamping of signal fixtures is included only during KONE's maintenance visits. Service requests for re-lamping of signal fixtures will be billed separately at KONE's then current labor rates.

12. Car Equipment

All elevator control system components on the car.

B. Hydraulic Elevators

1. Relay Logic Control System

All control system components.

2. Microprocessor Control System

All control system components. System performance examinations will be conducted to ensure that dispatching and motion control systems are operating properly.

3. Power Unit

Pump, motor, valves, and all related parts and accessories.

4. Hoistway and Pit Equipment

All elevator control equipment and buffers.

5. Rails and Guides

Guide rails, guide shoe gibs, and rollers

6. Wiring

All elevator control wiring and all power wiring from the elevator equipment input terminals to the motor.

7. Door Equipment

Automatic door operators, hoistway and car door hangers, hoistway and car door contacts, door protective devices, hoistway door interlocks, door gibs, and auxiliary door closing devices.

8. Manual Freight Door Equipment

Switches, retiring cams, interlocks, guide shoes, sheaves, rollers, chains, sprockets, tensioning devices, and counter-balancing equipment.

9. Power Freight Door Equipment

Controller, relays, contactors, rectifiers, timers, resistors, solid state components, door motors, retiring cams, interlocks, switches, guide shoes, sheaves, rollers, chains, sprockets, and tensioning devices.

10. Hydraulic System Accessories

Exposed piping, fittings accessories between the pumping unit and the jack, jack packing, hydraulic fluid, and any heating or cooling elements installed by the original equipment manufacturer ("OEM") for controlling fluid temperature.

11. Signals and Accessories

Car operating panels, hall push button stations, hall lanterns, emergency lighting, car and hall position indicators, car operating panels, fireman's service equipment and all other signals, and accessory facilities furnished and installed as an integral part of the elevator equipment. Re-lamping of signal fixtures is included only during KONE's maintenance visits. Service requests for re-lamping of signal fixtures will be billed separately at KONE's then current labor rates.

12. Car Equipment

All elevator control system components on the car.

3. TESTING

KONE is not obligated to: perform safety tests other than those specified herein; perform any work required by new or retroactive code changes; perform tests required or correct outstanding violations or deficiencies identified prior to the effective date. Unless specifically provided for in this section; a written Maintenance Control Plan (MCP) and documented testing procedures are not included, even when required by current code, as such that code may be changed or amended from time to time by local jurisdictions. KONE is not responsible for providing documentation onsite, as all reporting and testing records are available digitally.

4. HOURS OF SERVICE

All services described above in this Agreement will be performed during the regular working hours of the regular working days of the elevator or escalator trade in the location where the services are performed, unless otherwise specified in the Agreement.

5. SERVICE REQUESTS (CALLBACKS)

Service requests are defined as services that require immediate attention and that are within the scope of services and not excluded from the scope of services as provided below. Service requests outside the scope of services will be billed separately at KONE's then current labor rates and material prices plus mileage and incidentals. Any rates and lump sum amounts are not subject to audit. Service requests that require more than one technician or more than two hours to complete will be treated as a repair and scheduled in accordance with the Hours of Service section above. Purchaser agrees that KONE may perform service requests made by any person that KONE believes is authorized by Purchaser to make such requests. Unless specified herein travel time and expenses are billable.

Regular Time Coverage - (Hattiesburg Municipal Court; City Hall; Museum ; Parking Garage;)

In addition to the work described in the Scope of Services section, this Agreement covers requests for service during the regular working hours of the regular working days of the elevator trade.

6. REPORTING SERVICES

KONE may provide Purchaser with access to KONE's online reporting tool. Based on the Purchaser's user access, Purchaser can view information about the performance and service of the Equipment. KONE may provide Purchaser with automatic email notifications that provide information on work performed.

7. EXCLUSIONS

The following are excluded from the scope of services:

A. GENERAL

1. KONE is not obligated to: removal of water or excessive debris from the pit; make replacements or repairs necessitated by fluctuations in the building power systems, adverse machine room or environmental conditions (including without limitation temperature variations below 50 degrees or above 90 degrees Fahrenheit) or humidity greater than 95% relative humidity, prior water exposure, rust, fire, explosion, acts of God, misuse, vandalism, theft, acts or mandates of government, labor disputes, strikes, lockouts, or tampering with the equipment by any person other than a KONE representative, negligence or acts or omissions of the Purchaser or any third party, or any other cause beyond KONE's control.
2. KONE agrees to maintain the existing performance as designed and installed. KONE is not required under this Agreement to make changes in operation and/or control, subsequent to the date of this Agreement.
3. Notwithstanding anything contained to the contrary within this Agreement, KONE's work shall not include any abatement or disturbance of asbestos containing material (ACM), presumed asbestos containing materials (PACM), or other hazardous materials (i.e. lead, PCBs) (collectively "HazMat"). Any work in the affected area where reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from the HazMat is excluded from KONE's scope of work without an applicable change order to reflect the additional costs and time. In accordance with OSHA requirements, Purchaser shall inform KONE and its employees who will perform work activities in areas which contain HazMat of the presence and location of HazMat in such areas which may be contacted during work before entering the area. Other than as expressly disclosed in writing, Purchaser warrants that KONE's work area at all times meets applicable OSHA permissible exposure limits (PELs). KONE shall have the right to discontinue its work in any location where suspected HazMat is encountered or disturbed. Any HazMat removal or abatement, or delays caused by such, required in order for KONE to perform its work shall be Purchaser's sole responsibility and expense. After any removal or abatement, Purchaser shall provide documentation that the HazMat has been abated from the KONE work area and air clearance reports shall be made available upon request prior to the start of KONE's work.
4. Nothing contained within this agreement shall be construed or interpreted as requiring KONE to assume the status of an owner, operator, generator, storer, transporter, treater or disposal facility as those terms appear within RCRA or any Federal or State statute or regulation governing the generation, transportation, treatment, storage and disposal of pollutants. Purchaser shall be responsible to execute all waste manifests necessary to transport hazardous materials for disposal.

B. OBsolescence

1. Component may become obsolete during the term of this Agreement. Obsolete components are not covered under this Agreement. KONE will provide Purchaser with a separate quotation for the price to replace obsolete components. Equipment modifications necessary to accommodate replacement of obsolete components are at the Purchaser's expense.
2. Components include without limitation any part, component, assembly, product, or firmware or software module. A component is obsolete when it can no longer be economically produced due to the cessation of consistent sources for materials, a loss or termination of a manufacturing process occurs, product reliability analysis shows that it is not economically feasible to continue to produce the component, escalation of component costs beyond acceptable industry expectations drive alternative equipment upgrades, the support of product safety programs or conformance to codes or standards mandates that use of a component be discontinued in its entirety, the OEM designates the component as obsolete, or such component has been installed 20 or more years. No exception to the above will be made for a component designated as obsolete because it can be custom made or acquired at any price. KONE will not be required to furnish reconditioned or used components. After the component that replaces the obsolete component is installed, that component is covered under this Agreement unless it becomes obsolete.

C. ELEVATOR

1. Refinishing, repairing, replacing, or cleaning of the: car enclosure; gates or door panels; door pull straps; hoistway enclosure; rail alignment; hoistway doors; door frames; sills; hoistway gates; flooring; power feeders, switches, and their wiring and fusing; car light diffusers; ceiling assemblies and attachments; smoke or heat sensors; fans; fireman's phone devices; intercoms; phone lines; music systems; media displays; card-readers or other security systems; computer monitoring systems; light tubes and bulbs; pit pumps; emergency power generators; hydraulic cylinder; unexposed piping; or disposal or clean-up of waste oil or contamination caused by leaks in the hydraulic cylinder or unexposed piping. KONE is not obligated to perform or keep records of firefighter's service testing, unless specifically included in this Agreement.

8. REMOTE MONITORING

If the Equipment is equipped with remote monitoring capabilities, Purchaser gives KONE the right to utilize this functionality and the phone line to the Equipment to collect data related to the use and operation of the Equipment.

9. SAFETY

Purchaser will provide a safe workplace for KONE personnel and safe access to the equipment, property and machine room areas and keep all machine rooms and pit areas free from water, stored materials and debris; remove and dispose of any hazardous materials, water or waste according to applicable laws and regulations; post any and all instructions and warnings related to the use of the equipment. Purchaser will be solely responsible for proper use, for supervising the use of the equipment, and for taking such steps including but not limited to providing attendant personnel, warning signs and other controls necessary to ensure the safety of the user or safe operation of the equipment.

If in KONE's sole judgment the equipment presents a safety hazard to the riding public or KONE's technicians (including but not limited to Purchaser's act of creating or allowing unsafe practices or conditions or Purchaser's failure to authorize necessary repairs or upgrades), KONE may immediately terminate this Agreement in its entirety upon written notice. To the extent that KONE provides Purchaser with any oral or written account, report, information, or other statement identifying a safety issue with the equipment that is the subject of the Agreement or otherwise makes any recommendation or proposal to make a safety improvement or to address a safety issue related to such equipment, and Purchaser does not immediately approve KONE's proposal or recommendation, Purchaser agrees to indemnify, defend, and hold KONE harmless for any claims arising out of Purchaser's failure to comply with KONE's recommendations and proposals, and any obligation on the part of KONE to indemnify or defend Purchaser with regard to such claim shall be null and void.

10. NOTICE OF MALFUNCTION OR INJURY

As to any elevator or escalator equipment that is the subject of the Agreement, Purchaser will: (i) immediately shut down any such equipment that presents a potential safety hazard; and (ii) provide prompt verbal notice to KONE's Service Center of such hazard. Purchaser will immediately notify KONE's Service Center of any injury or accident in or about such equipment, followed by prompt written notice of such injury or accident. Any indemnity of Purchaser provided by KONE under the Agreement becomes null and void and will not be considered in interpreting the Agreement if Purchaser does not take the action or provide the notice required by this provision.

11. THIRD PARTY SERVICES

A. N/A

B. If Purchaser determines that it requires any services outside the scope of this Agreement, Purchaser will provide KONE with an opportunity to provide a quotation for such services or to meet any offer from a third party. If KONE agrees to meet a third party offer, Purchaser will enter into a separate contract with KONE for such services. If Purchaser elects to have a third party perform the services, KONE reserves the right to adjust the price of this Agreement.

C. If a third party works on the equipment during the term of this Agreement, KONE reserves the right to inspect the equipment and may determine that re-work, different or additional work is required. Purchaser will reimburse KONE for the cost the inspection and any additional work required. If Purchaser declines to have KONE perform the additional work, KONE reserves the right to cancel the Agreement upon written notice to Purchaser.

12. NON-KONE EQUIPMENT

If the equipment covered under this Agreement was not manufactured by KONE (or a company acquired by KONE), Purchaser will: (i) provide KONE with a complete set of as-built wiring diagrams, (ii) Purchaser will procure and pay for replacement parts or proprietary diagnostic devices from the OEM, if requested by KONE, and (iii) provide Maintenance Control Plan (MCP) test procedures as required by current code, as that code may be changed or amended from time to time. KONE will reimburse Purchaser for the actual cost paid by Purchaser for OEM parts acquired at KONE's request. KONE is not responsible for any delays, damages, cost, or claims arising from or in connection with Purchaser's failure to provide OEM parts or proprietary diagnostic devices in a timely manner. Purchaser authorizes KONE to produce single copies of the EPROM and/or ROM chips for each unit for the sole purpose of an archive backup of the embedded software to allow for replacement of a defective or damaged chip. These will be stored on the building premises and the Purchaser retains possession.

TERMS AND CONDITIONS

1. TERM AND TERMINATION

- A. This Agreement will commence on the effective date and continue for an initial period of TWO (2) years . Either party may terminate this Agreement at the end of the initial TWO (2) year term.
(90) days nor more than one hundred twenty (120) days written notice, via certified mail, prior to the expiration date of the then current term of the Agreement.
- B. If a party materially breaches the Agreement, the other party shall provide written notice of the breach and a reasonable time under the circumstances to cure the breach, but in no event less than a thirty (30) days cure period. If the breaching party fails to cure the breach within the specified time period, the non-breaching party may terminate the Agreement upon fifteen (15) days written notice to the other party.
- C. Upon termination of the of the Agreement, a \$500 decommissioning and transfer fee shall apply for any elevator phone that needs reprogramming to a different number for emergency monitoring.

2. CANCELLATION

N/A

3. ASSIGNMENT

N/A

4. PRICE ADJUSTMENTS

Contract Price stays the same for length of intial contract

5. PAYMENT TERMS

Payment is due net thirty (45) days from the date of the invoice. A charge of the greater of: (i) one and one half percent (1½%); or (ii) the maximum rate permitted by applicable law, will be applied to the unpaid balance.

6. SUSPENSION OF SERVICE

If Purchaser fails to pay any invoice within the specified payment terms or if Purchaser breaches any material provision of the Agreement, KONE may stop work or suspend its services under this Agreement and/or other contracts with the Purchaser until all invoices are current or Purchaser cures the breach. Any requests for service during the period of suspension of service or repairs necessitated by the lack of maintenance service will be invoiced by KONE and paid separately by Purchaser. If Purchaser fails to make timely payment, any indemnity provided by KONE under the Agreement is null and void as to any damages that arise during the suspension period for non-payment. Purchaser waives all claims against KONE arising from or related to suspension of service pursuant to this provision.

7. TAXES

Purchaser is responsible for the payment of all federal, state, or local taxes applicable to the services or materials provided under the

Agreement.

8. INSURANCE AND INDEMNIFICATION

KONE will provide an Owners and Contractors Protective Liability Policy, which lists Purchaser as Named Insured. This policy will remain in effect for the duration of this Agreement. Limit to be \$1,000,000. To the extent permitted by law, each party will indemnify, defend, and hold the other party harmless from and against any and all claims, demands, actions, suits, proceedings, judgments, damages, loss, liabilities, costs, or expenses, including without limitation court costs and reasonable attorney's fees, arising from or related to the indemnifying party's sole negligence or willful misconduct in performance of the Agreement. Each party is responsible for its share of any comparative or contributory negligence without indemnity by the other party. Each party's indemnity obligations are expressly conditioned on the indemnified party: (i) giving the indemnifying party prompt written notice of each claim; (ii) promptly tendering to the indemnifying party the defense or settlement of each claim; and (iii) cooperating with the indemnifying party at the indemnified party's expense in defending or settling each claim. If an indemnified party does not comply strictly with the terms of this provision, the indemnifying party's indemnity obligations will become null and void and will not be considered in interpreting the Agreement.

9. LIMITATION OF LIABILITY

- A. Notwithstanding anything to the contrary in this Agreement, KONE's total liability to Purchaser under the Agreement is limited to the total amount paid by Purchaser to KONE during the calendar year in which the liability occurred.
- B. In no event will either party be liable to the other party for indirect, incidental, consequential, special, exemplary, or punitive damages of any kind or nature arising from or related to performance of the Agreement, including without limitation loss of profits, loss or inaccuracy of data, or loss of use damages, even if the party has been advised of the possibility of such damages and even if under applicable law such damages would not be considered for indirect, incidental, punitive, special, or consequential damages. Each party hereby waives its rights to such damages to the fullest extent permitted by applicable law.

10. U.S. GOVERNMENT SALES

If the product(s) or service(s) provided under this Agreement are for end use by a federal, state or local government customer, KONE makes no representations, certifications or warranties whatsoever with respect to the ability of its product(s), service(s) or price(s) to satisfy any applicable federal, state or local statutes or regulations, including without limitation the Federal Acquisition Regulation ("FAR").

11. FORCE MAJEURE

A party is not liable for failure to perform its obligations under the Agreement if such failure results from Acts of God, fire, flood, unusual delay in deliveries, unavoidable casualties, terrorist activities, government sanction, blockage, embargo, labor dispute, strike, or lockout, concealed conditions, shortage or unavailability of materials, supplies, labor, equipment or systems, interruption or failure of electricity or telephone service or any other causes beyond KONE's control. The non-performing party must promptly notify the other party in writing of the force majeure event and resume performance immediately upon cessation of the event.

12. VENUE

The exclusive venue for any dispute between the parties shall be in the County and State of the Premises as set forth as Hattiesburg Mississippi.

13. PROPERTY RIGHTS

- A. KONE will provide Purchaser with any information or materials that it provides generally to all its customers in the ordinary course of its business. Any tools, devices, or other equipment that KONE uses to perform its services or monitor the Equipment remains the sole property of KONE. If this Agreement terminates or expires for any reason, Purchaser will give KONE access to the premises to remove such equipment at KONE's expense.
- B. KONE retains all rights, title, and interest, including all intellectual property rights, in and to the written materials it provides to Purchaser or uses to perform its services, including without limitation shop drawings, technical documentation, and user manuals, and to any software provided with the equipment. Purchaser will not use such software except in connection with the use and operation of the Equipment. Purchaser will not reverse engineer or otherwise attempt to obtain the source code of any software in object code form.

14. MISCELLANEOUS

The Agreement, including any attachments, supersedes all prior written or oral negotiations, commitments, agreements, and understandings between the parties relating to the subject thereof, and constitutes the entire agreement between the parties with

respect to the subject matter hereof. The Agreement is not effective until signed by KONE's authorized representative or until KONE commences work under the Agreement. Notwithstanding anything to the contrary in this Agreement, if Purchaser causes or permits KONE to commence performance of services, Purchaser accepts the terms and conditions of this Agreement. The Agreement may not be modified, amended, canceled, or altered by custom and usage of trade or course of dealing. Any section headings are for convenience only and will not in any way limit the scope or affect the interpretation of any provision of the Agreement. In the event any part of the Agreement is determined to be invalid or non-enforceable, the remaining part or provisions will continue in full force and effect. Failure or delay by a party to exercise any right, remedy, power, or privilege accorded by the Agreement does not constitute a waiver of such right, remedy, power, or privilege. A waiver is effective only if in writing and signed by the waiving party. A written waiver of default will not operate as a waiver of any other default or of the same default in the future. The terms and conditions of the Agreement that by their sense and context are intended to survive expiration or termination of the Agreement will so survive, including without limitation the making of all payments hereunder.

PRICE

\$1,049.87 per month payable by Purchaser annually in advance (\$12,598.44 per annual installment). If Purchaser does not sign this Agreement within 90 days after the tender date above, KONE reserves the right to submit a revised price.

The price is based upon annual in advance payment. In the event Purchaser chooses one of the following payment options by initialling the selection below, a surcharge will apply as outlined:

Payment Option	Surcharge	Revised Monthly Price	Acceptance
Annual in advance payment	0% Increase	\$1,049.87 per month	
Semi-Annual in advance payment	3% Increase	\$1,081.37 per month	
Quarterly in advance payment	6% Increase	\$1,112.86 per month	
Monthly in advance payment	8% Increase	\$1,133.86 per month	

CITY OF HATTIESBURG

Respectfully submitted,

Kerry DuPree

.....
(Signature of Authorized Representative)

KONE Inc.

.....
(Print Name)

.....
(Approved by) Authorized Representative

.....
Title

.....
Title

.....
Date

.....
Date

KONE Care Value Added Services

These services are offered to improve the quality and transparency of the KONE service delivery experience.

TESTING

In addition to the work described in the Services section above, the following additional services have been negotiated and are included at the determined frequency as listed. KONE is not liable for any property damage or personal injury, including death, resulting from test.

1. Hattiesburg Municipal Court

CAT1 Traction Test 12 Mo - An annual no load test as required by applicable code.

2. City Hall

CAT1 Hydraulic Test 12 Mo - An annual pressure relief test and a yearly leakage test as required by applicable code.

3. Museum

CAT1 Hydraulic Test 12 Mo - An annual pressure relief test and a yearly leakage test as required by applicable code.

4. Parking Garage

CAT1 Hydraulic Test 12 Mo - An annual pressure relief test and a yearly leakage test as required by applicable code.

24/7 CONNECTED SERVICES

KONE's 24/7 Connected Services uses proprietary advanced remote monitoring and analysis technologies to bring intelligent services to elevators and escalators. 24/7 Connected Services provides continuous updates on the status and condition of the equipment, allowing KONE to perform services tailored to each equipment's needs. 24/7 Connected Services is a family of different services that may be ordered separately.

As consideration and in order for KONE to be able to provide the 24/7 Connected Services to the Customer, the Agreement is hereby amended as follows:

1. KONE to provide the Services set forth below are included with this service agreement. This Service fee will be charged on the maintenance invoice at the same interval as the invoicing for maintenance under the Agreement. Installation and/or set-up fees will be provided in a separate proposal when applicable. The interest on any late payments shall be as detailed in the Agreement.
2. KONE shall perform the selected Value-Added Services (each a "Service" and together the "Services") substantially as set forth and authorized below:

A. KONE Care - Emergency Phone Monitoring

KONE shall program the elevator phone(s) listed below to call the KONE Customer Care Center and will monitor the elevator phone(s).

Customer shall:

1. Provide names and phone numbers of at least two (2) of its representatives for the KONE Service Center to contact on a 24 hour basis, and at least one (1) police, fire or local 911 agency name and phone number.
2. Notify KONE immediately in writing of any changes in these names or numbers. In the event of a call from the elevator, the KONE Customer Care Center will contact the points of contact in the order listed below. The local authorities will be contacted only if the previously mentioned point of contacts cannot be reached.
3. If KONE does not provide Wireless Phone Provider Service, Customer shall provide an analog phone line to the elevator machine room (to be terminated on the appropriate phone jacks). If phone line is an extension off an existing phone system, a backup power source must also be provided. An extension, if applicable, must be a direct inward dial (DID) extension. All phones and associated equipment shall be in compliance with the requirements of ASME A17.1, local codes and applicable law, as amended. Customer shall also provide the elevator phone number(s) and/or extension(s) for the phone(s) being programmed.

3. The KONE Care 24/7 Connected Services are performed for the following equipment:

Equipment Name	KONE Equipment #	Wireless Phone	Phone Monitoring	24/7 Connect
Hattiesburg Municipal Court	42515047		X	
City Hall	20027246		X	
Museum			X	
Parking Garage			X	

Service	Price / Month
Kone Care Emergency Phone Monitoring	100.00
KONE Care Wireless Phone Provider Service	
24/7 Connect Performance Analytics	

4. Unless the remote monitoring device was a built-in component of a new KONE elevator, the remote monitoring devices are installed to the equipment by KONE solely in order to enable the Services. The remote monitoring devices are provided to the Customer as part of the Services. Purchaser gives KONE the right to utilize 24/7 Connected Services to collect, export and use data generated by the use and operation of the equipment, regardless if Customer elects any of the Services. Purchaser will not use the 24/7 Connected Services device, except in connection with the use and operation of the equipment. Purchaser will not reverse engineer or otherwise attempt to obtain the source code of any software in object code form. Purchaser has no ownership or proprietary rights to such data, nor the device or software that monitors, analyzes, translates, reports or compiles such data. KONE 24/7 Connected Services, including any data collected, the device(s) to perform the service, and any software related thereto shall be the exclusive property of KONE.
5. KONE 24/7 Connected Services is a family of remote monitoring Services. The parties may later agree to add new Services to the equipment.
6. The Services shall be performed for the duration of the Agreement. Should the Agreement expire or terminate, the Services will automatically terminate.
7. If any or all Services are terminated, unless the remote monitoring device was a built-in component of a new KONE elevator, the Customer shall upon request give KONE access to the equipment to remove any remote monitoring devices owned by KONE along with any other equipment which remains KONE's property at the facility or otherwise at KONE's expense. Such right shall survive the expiration or termination of the Agreement. Upon termination for any reason of either the Emergency Phone Monitoring or Wireless Phone Provider Service, no further phone services will be provided, the phone(s) must be immediately reprogrammed to dial to a location other than a KONE designated phone number and KONE will block the phone numbers from coming into the KONE Service Center. Upon termination for any reason of the Data Remote Monitoring, no further data will be collected. Upon any termination or expiration of the Agreement, no further Services will be provided, including phone services or data collection. KONE shall have no obligation to any party to either collect, export or analyze any data, or to provide the source code of any software in object code form.
8. If the Customer uses its own SIM card or network connection for the data transfer required by the Services, KONE shall not be liable for the costs of such data transfer incurred due to the Services

Attachment "A"
Amendments to Service Agreement

The parties hereby agree to be bound to the terms contained in the Agreement, together with those terms contained in this Attachment A. In the event of conflict between terms contained in the Agreement and terms contained in this Attachment A, the terms in this Attachment A shall supersede and prevail.

Hattiesburg Municipal Court - \$389.85 Monthly

City Hall - \$220.00 Monthly

Museum - \$220.00 Monthly

Parking Garage - \$220.00 Monthly

All Pricing includes phone monitoring for each unit



Memorandum

To: Mayor Toby Barker and Members of City Council

From:

cc:

Date: Tuesday, January 7, 2020

Re: Authorize submittal of an Amendment to award MS-2017-003-01 with the Federal Transit Administration (FTA) to reprogram remaining funds following the completion of the Mass Transit Operations Facility.

File Number: 2020-2
Minute Book #

Summary

Recommendation Statement

Please place this on the January 7, 2020 City Council meeting for consideration.

DOT

FTA

U.S. Department of Transportation

Federal Transit Administration

Application

Federal Award Identification Number (FAIN)	MS-2017-003-01
Temporary Application Number	1108-2017-2
Application Name	Section 5307 Construction of Hub City Admin/Maint Facility
Application Status	Transmitted / Ready for FTA Review
Application Budget Number	0

Part 1: Recipient Information

Name: HATTIESBURG, CITY OF

Recipient ID	Recipient OST Type	Recipient Alias	Recipient DUNS
1108	City	CITY OF HATTIESBURG	079448130

Location Type	Address	City	State	Zip
Headquarters	200 FORREST ST	HATTIESBURG	MS	394013451
Physical Address	200 FORREST ST	HATTIESBURG	MS	39401
Mailing Address	PO BOX 1898	HATTIESBURG	MS	39403

Union Information

Union Name	NO UNIONS
Address 1	N/A
Address 2	
City	N/A
State	
Zipcode	
Contact Name	N/A
Telephone	000-000-00
Fax	
E-mail	
Website	

Part 2: Application Information

Title: Section 5307 Construction of Hub City Admin/Maint Facility

FAIN	Application Status	Application Type	Date Created	Last Updated Date	From TEAM?
MS-2017-003-01	Transmitted / Ready for FTA Review	Grant	12/11/2019	12/11/2019	No

Application Start Date

6/20/2017

Application End Date

9/30/2021

Application Executive Summary

Amendment Executive Summary:

This amendment will use the remaining \$169,720 federal funds and associated local match for ongoing Preventive Maintenance for the transit system.

This grant will use Section 5307 FY16 funds for a total amount of \$469,951 (\$375,961 federal and \$93,990 local match).

Local match. Local match will come from the City of Hattiesburg's General Fund. This project is programmed in the Mississippi 2020-2022 STIP as an ongoing and regular Section 5307 project.

This grant will fund (1) project for Preventive Maintenance

Notes:

- a. Amendment Overall Start Date February 1, 2020; Amendment Overall End Date September 30, 2021
- b. Is this grant for research and development? No
- c. The City of Hattiesburg will not apply an Indirect Cost Rate.
- d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached.

Attachments: STIP

Original Executive Summary:

This grant will use Section 5307 FY16 funds for a total amount of \$469,951 (\$375,961 federal and \$93,990 local match).

Local match. Local match will come from the City of Hattiesburg's General Fund. This project is programmed in the Mississippi 2017-2020 STIP approved on October 1, 2016 and approved for Hattiesburg on January 11, 2017. Amended for Hattiesburg-Petal-Forrest-Lamar on June XX, 2017. See attached STIP pages.

This grant will fund (1) project for Construction - Admin/Maint Facility

Notes:

- a. Overall Start Date July 10, 2017 Overall End Date September 30, 2019
- b. Is this grant for research and development? No
- c. The City of Hattiesburg will not apply an Indirect Cost Rate.
- d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached.

Attachments: STIP

Frequency of Milestone Progress Reports (MPR)

Quarterly

Frequency of Federal Financial Reports (FFR)

Quarterly

Does this application include funds for research and/or development activities?

This award does not include research and development activities.

Pre-Award Authority

This award is using Pre-Award Authority.

Does this application include suballocation funds?

Recipient organization is the Designated Recipient and can apply for and receive these apportioned funds.

Will this Grant be using Lapsing Funds?

No, this Grant does not use Lapsing Funds.

Will indirect costs be applied to this application?

This award does not include an indirect cost rate.

Indirect Rate Details: N/A

Requires E.O. 12372 Review

No, this application does not require E.O. 12372 Review.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Application Point of Contact Information

First Name	Last Name	Title	E-mail Address	Phone
Andrew	Ellard	Urban Development Director	aellard@hattiesburgms.com	601-545-4609
	layana.george@dot.gov	Student Trainee (General Engineer)		
	abigail.rivera@dot.gov	Community Planner		

Application Budget Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5307 - (MAP 21) Urbanized Area Formula (FY2013 and forward)	5307-2A	20507	\$545,681
Local			\$136,420
Local/In-Kind			\$0

State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$682,101

Application Budget

Project Number		Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
MS-2017-003-01-01	114-00 (114-A1)	BUS: SUPPORT EQUIP AND FACILITIES	\$375,961.00	\$93,990.00	\$469,951.00	1
MS-2017-003-01-01		11.43.03 CONSTRUCT - ADMIN/MAINT FACILITY	\$375,961.00	\$93,990.00	\$469,951.00	1
MS-2017-003-01-P2	117-00 (117-)	OTHER CAPITAL ITEMS (BUS)	\$169,720.00	\$42,430.00	\$212,150.00	1
MS-2017-003-01-P2		11.7A.00 PREVENTIVE MAINTENANCE	\$169,720.00	\$42,430.00	\$212,150.00	1

Earmark and Discretionary Allocations

This application does not contain earmarks or discretionary allocations.

Sources of Federal Financial Assistance

PO Number	Project Number	Scope Name	Scope Number	Scope Suffix	UZA Code	Area Name	Account Class Code	FPC	Description	Amendment Amount	Cumulative Amount
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MS-90- X100	MS- 2017- 003-01- 01	BUS: SUPPORT EQUIP AND FACILITIES	114-00 (114)	A1	280000	Mississippi	2016.25.90.91.2	00	Urbanized Area Formula Grants	\$0	\$375,961
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Part 3: Project Information

Project Title: Section 5307 Construction of Hub City Transit Admin/Maint Facility

Project Number	Temporary Project Number	Date Created	Start Date	End Date
MS-2017-003-01-01	1108-2017-2-P1	12/11/2019	7/10/2017	9/30/2019

Project Description

This grant will use Section 5307 FY16 funds for a total amount of \$469,951 (\$375,961 federal and \$93,990 local match).

Local match. Local match will come from the City of Hattiesburg's General Fund. This project is programmed in the Mississippi 2017-2020 STIP approved on October 1, 2016 and approved for Hattiesburg-Petal-Forrest-Lamar on January 11, 2017. Amended for Hattiesburg on June XX, 2017. See attached STIP pages.

This grant will fund (1) project for Construction - Admin/Maint Facility.

Notes:

- Overall Start Date July 10, 2017 Overall End Date September 30, 2019
- Is this grant for research and development? No
- The City of Hattiesburg will not apply an Indirect Cost Rate.
- The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached.

Attachments: STIP

Project Benefits

This project will benefit Hub City Transit (HCT) and all individuals who utilize it. With the reconstructed HCT Administrative and Maintenance Facility, HCT will run much more smoothly and efficiently. HCT is has being housed at the Hattiesburg Intermodal Facility since a tornado destroyed the Administrative and Maintenance Facility. Later this month, HCT will move into a temporary facility, an old car dealership, while the HCT Administrative and Maintenance Facility is being rebuilt.

Additional Information

The EF-3 tornado that came through Hattiesburg on January 21, 2017 dismantled Hub City Transit. The tornado destroyed the transit facility and each of the buses sustained significant damage. HCT is has being housed at the Hattiesburg Intermodal Facility since a tornado destroyed the Administrative and Maintenance Facility. Later this month, HCT will move into a temporary facility, an old car dealership, while the HCT Administrative and Maintenance Facility is being rebuilt.

Location Description

This project will take place in the UZA of Hattiesburg, Mississippi. The construction of the transit facility will take place on the grounds of land owned by the City of Hattiesburg, where the current destroyed transit facility is located.

Security

Yes -- our organization will expend at least 1% of the 5307 funds in this application for security-related projects

Project Location (Urbanized Areas)

UZA Code	Area Name
283380	Hattiesburg, MS

Congressional District Information

State	District	Representative
Mississippi	4	Steven M Palazzo

Program Plan Information**STIP/TIP**

Date: Not Provided

Description: I will add the STIP page with this project in it once it has been approved.

UPWP

Date: 7/7/2016

Description: See pages 9, 10, 22, 23 and 24.

Long Range Plan

Date: 12/1/2015

Description: See pages 9-4 through 9-6.

Project Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5307 - (MAP 21) Urbanized Area Formula (FY2013 and forward)	5307-2A	20507	\$375,961
Local			\$93,990
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$469,951

Project Budget

Project Number		Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
MS-2017-003-01-01	114-00 (114-A1)	BUS: SUPPORT EQUIP AND FACILITIES	\$375,961.00	\$93,990.00	\$469,951.00	1
MS-2017-003-01-01		11.43.03 CONSTRUCT - ADMIN/MAINT FACILITY	\$375,961.00	\$93,990.00	\$469,951.00	1

Project Budget Activity Line Items

Budget Activity Line Item: 11.43.03 - CONSTRUCT - ADMIN/MAINT FACILITY

Scope Name / Code	Line Item #	Line Item Name	Activity	Quantity
BUS: SUPPORT EQUIP AND FACILITIES (114-00)	11.43.03	CONSTRUCT - ADMIN/MAINT FACILITY	CONSTRUCTION OF BUS SUPPORT EQUIP/FACIL	1

Extended Budget Description

Construction to rebuild the existing Hub City Administrative and Maintenance Transit Facility destroyed in the January 21, 2017 tornado. The existing destroyed facility will be demolished and a new facility will be constructed in the existing facility's footprint. (Demolition will not be completed with FTA funds.) The existing slab will not be demolished.

A new facility of approx. 9,600 square feet will be constructed. This facility will include offices, dispatch area, storage and ADA restrooms on the first floor of approx. 6,400 square feet; offices, storage and a restroom on the second floor of approx. 3,200 square feet and a service bay for buses and equipment. One open service bay for the buses and equipment of approx. 2,000 square feet will be constructed. (see attached supplemental documentation of the project)

This grant will fund the construction which will consist of:

- Construction Funding: The City of Hattiesburg anticipates completing all construction in one phase, as the Mass Transit Department is being housed in a temporary facility and the City of Hattiesburg wants the construction of the Mass Transit Admin/Maint Facility to be completed as soon as possible.

The reconstruction of the Administrative and Maintenance Transit Facility has been reviewed by the Environmental Specialists in the Regional Office and has been determined a Categorical Exclusion C(8). See attached memo.

Will 3rd Party contractors be used to fulfill this activity line item?

Yes, 3rd Party Contractors will be used for this line item.

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5307 - (MAP 21) Urbanized Area Formula (FY2013 and forward)	5307-2A	20507	\$375,961
Local			\$93,990
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0

Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$469,951

Milestone Name	Est. Completion Date	Description
RFB/IFB Issued	7/10/2017	RFP/IFB Issued.
Contract Awarded	10/10/2017	Contract Awarded. Construction Begins.
Contract Complete	7/1/2019	Contract Complete.
Project Closeout	9/30/2019	Project Closeout.

Project Environmental Findings

Finding: Class II(c) - Categorical Exclusions (C-List)

Class Level Description

Class II(c) consists of projects called categorical exclusions (CEs) which are known not to have, either individually or cumulatively, a significant environmental impact on the human or natural environment and are therefore categorically excluded from the requirement to prepare an environmental assessment or an environmental impact statement. Class II(c) does not require documentation.

Categorical Exclusion Description

Type 08: Maintenance, rehabilitation, and reconstruction of facilities that occupy substantially the same geographic footprint and do not result in a change in functional use, such as: improvements to bridges, tunnels, storage yards, buildings, stations, and terminals; construction of platform extensions, passing track, and retaining walls; and improvements to tracks and railbeds.

Date Description	Date
Class IIc CE Approved	5/19/2017

Project Title: Preventive Maintenance

Project Number	Temporary Project Number	Date Created	Start Date	End Date
MS-2017-003-01-P2	MS-2017-003-01-P2	12/11/2019	2/1/2020	9/30/2021

Project Description

Project includes the preventive maintenance of transit rolling stock and facilities.

Project Benefits

This project is part of a continuous effort to maintain a safe, efficient, and reliable fleet of buses and facilities for the transit system. Passengers across the transit system will benefit from well-maintained transit assets.

Additional Information

None provided.

Location Description

Preventive maintenance serves the entire transit system.

Security

No -- our organization will NOT expend at least 1% of the 5307 funds in this application for security-related projects

Project Location (Urbanized Areas)

UZA Code	Area Name
283380	Hattiesburg, MS

Congressional District Information

State	District	Representative
Mississippi	4	Steven M Palazzo

Program Plan Information

STIP/TIP

Date: 10/1/2018

Description: Select pages from the STIP are included, showing Section 5307 resources allocated to Preventive Maintenance.

UPWP

Date: N/A

Description: N/A

Long Range Plan

Date: N/A

Description: N/A

Project Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5307 - (MAP 21) Urbanized Area Formula (FY2013 and forward)	5307-2A	20507	\$169,720
Local			\$42,430
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$212,150

Project Budget

Project Number	Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
MS-2017-003-01-P2	117-00 (117-) OTHER CAPITAL ITEMS (BUS)	\$169,720.00	\$42,430.00	\$212,150.00	1
MS-2017-003-01-P2	11.7A.00 PREVENTIVE MAINTENANCE	\$169,720.00	\$42,430.00	\$212,150.00	1

Project Budget Activity Line Items

Budget Activity Line Item: 11.7A.00 - PREVENTIVE MAINTENANCE

Scope Name / Code	Line Item #	Line Item Name	Activity	Quantity
OTHER CAPITAL ITEMS (BUS) (117-00)	11.7A.00	PREVENTIVE MAINTENANCE	OTHER CAPITAL ITEMS (BUS)	1

Extended Budget Description

Provision of preventive maintenance services - both in-house and outsourced to various vendors - for the general maintenance and needed repair of all system equipment and facilities. Said services are anticipated to be provided from February 1, 2020 to September 30, 2021.

Will 3rd Party contractors be used to fulfill this activity line item?

No, 3rd Party Contractors will not be used for this line item.

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5307 - (MAP 21) Urbanized Area Formula (FY2013 and forward)	5307-2A	20507	\$169,720
Local			\$42,430
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$212,150

Milestone Name	Est. Completion Date	Description
Start Date	2/1/2020	
End Date	9/30/2021	

Project Environmental Findings

Finding: Class II(c) - Categorical Exclusions (C-List)

Class Level Description

Class II(c) consists of projects called categorical exclusions (CEs) which are known not to have, either individually or cumulatively, a significant environmental impact on the human or natural environment and are therefore categorically excluded from the requirement to prepare an environmental assessment or an environmental impact statement. Class II(c) does not require documentation.

Categorical Exclusion Description

Type 07: Acquisition, installation, rehabilitation, replacement, and maintenance of vehicles or equipment, within or accommodated by existing facilities, that does not result in a change in functional use of the facilities, such as: equipment to be located within existing facilities and with no substantial off-site impacts; and vehicles, including buses, rail cars, trolley cars, ferry boats and people movers that can be accommodated by existing facilities or by new facilities that qualify for a categorical exclusion.

Date Description	Date
Class IIc CE Approved	

Scope Name / Code	Line Item Number	Line Item Name	Quantity	FTA Amount	Total Eligible Cost
OTHER CAPITAL ITEMS (BUS) (117-00)	11.7A.00	PREVENTIVE MAINTENANCE	1	\$169,720.00	\$212,150.00

Part 4: Fleet Details

No fleet data exists for this application.

Part 5: FTA Review Comments

There are no review comments to display at this time.

Part 6: Agreement

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION

FEDERAL TRANSIT ADMINISTRATION

GRANT AGREEMENT (FTA G-26, October 1, 2019)

On the date the authorized U.S. Department of Transportation, Federal Transit Administration (FTA) official signs this Grant Agreement, FTA has obligated and awarded federal assistance as provided below. Upon execution of this Grant Agreement by the Recipient named below, the Recipient affirms this FTA Award, enters into this Grant Agreement with FTA, and binds its compliance with the terms of this Grant Agreement.

The following documents are incorporated by reference and made part of this Grant Agreement:

- (1) "Federal Transit Administration Master Agreement," FTA MA(26), October 1, 2019, <http://www.transit.dot.gov>,
- (2) The Certifications and Assurances applicable to the FTA Award that the Recipient has selected and provided to FTA, and
- (3) Any Award notification containing special conditions or requirements, if issued.

WHEN THE TERM "FTA AWARD" OR "AWARD" IS USED, EITHER IN THIS GRANT AGREEMENT OR THE APPLICABLE MASTER AGREEMENT, "AWARD" ALSO INCLUDES ALL TERMS AND CONDITIONS SET FORTH IN THIS GRANT AGREEMENT.

FTA OR THE FEDERAL GOVERNMENT MAY WITHDRAW ITS OBLIGATION TO PROVIDE FEDERAL ASSISTANCE IF THE RECIPIENT DOES NOT EXECUTE THIS GRANT AGREEMENT WITHIN 90 DAYS FOLLOWING FTA's AWARD DATE SET FORTH HEREIN.

FTA AWARD

Federal Transit Administration (FTA) hereby awards a Federal Grant as follows:

Recipient Information

Recipient Name: HATTIESBURG, CITY OF

Recipient ID: 1108

DUNS No: 079448130

Application Information

Federal Award Identification Number: MS-2017-003-01

Application Name: Section 5307 Construction of Hub City Admin/Maint Facility

Application Start Date: 6/20/2017

Application End Date: 9/30/2021

Application Executive Summary: Amendment Executive Summary:

This amendment will use the remaining \$169,720 federal funds and associated local match for ongoing Preventive Maintenance for the transit system.

This grant will use Section 5307 FY16 funds for a total amount of \$469,951 (\$375,961 federal and \$93,990 local match).

Local match. Local match will come from the City of Hattiesburg's General Fund. This project is programmed in the Mississippi 2020-2022 STIP as an ongoing and regular Section 5307 project.

This grant will fund (1) project for Preventive Maintenance

Notes:

a. Amendment Overall Start Date February 1, 2020; Amendment Overall End Date September 30, 2021

b. Is this grant for research and development? No

c. The City of Hattiesburg will not apply an Indirect Cost Rate.

d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached.

Attachments: STIP

Original Executive Summary:

This grant will use Section 5307 FY16 funds for a total amount of \$469,951 (\$375,961 federal and \$93,990 local match).

Local match. Local match will come from the City of Hattiesburg's General Fund. This project is programmed in the Mississippi 2017-2020 STIP approved on October 1, 2016 and approved for Hattiesburg on January 11, 2017. Amended for Hattiesburg-Petal-Forrest-Lamar on June XX, 2017. See attached STIP pages.

This grant will fund (1) project for Construction - Admin/Maint Facility

Notes:

a. Overall Start Date July 10, 2017 Overall End Date September 30, 2019

b. Is this grant for research and development? No

c. The City of Hattiesburg will not apply an Indirect Cost Rate.

d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached.

Attachments: STIP

Research and Development: This award does not include research and development activities.

Indirect Costs: This award does not include an indirect cost rate.

Suballocation Funds: Recipient organization is the Designated Recipient and can apply for and receive these apportioned funds.

Pre-Award Authority: This award is using Pre-Award Authority.

Application Budget

Total Application Budget: \$682,101.00

Amount of Federal Assistance Obligated for This FTA Action (in U.S. Dollars): \$169,720.00

Amount of Non-Federal Funds Committed to This FTA Action (in U.S. Dollars): \$42,430.00

Total FTA Amount Awarded and Obligated (in U.S. Dollars): \$545,681.00

Total Non-Federal Funds Committed to the Overall Award (in U.S. Dollars): \$136,420.00

Application Budget Control Totals

(The Budget includes the individual Project Budgets (Scopes and Activity Line Items) or as attached)

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5307 - (MAP 21) Urbanized Area Formula (FY2013 and forward)	5307-2A	20507	\$545,681
Local			\$136,420
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$682,101

(The Transportation Development Credits are not added to the amount of the Total Award Budget.)

U.S. Department of Labor Certification of Public Transportation Employee Protective Arrangements:

Review Decision: DOL Concurs - Certified
Original Certification Date: 6/15/2017

Special Conditions

There are no special conditions.

FINDINGS AND DETERMINATIONS

By signing this Award on behalf of FTA, I am making all the determinations and findings required by federal law and regulations before this Award may be made.

FTA AWARD OF THE GRANT AGREEMENT

Awarded By:

FEDERAL TRANSIT ADMINISTRATION
U.S. DEPARTMENT OF TRANSPORTATION
Contact Info:
Award Date:

EXECUTION OF THE GRANT AGREEMENT

Upon full execution of this Grant Agreement by the Recipient, the Effective Date will be the date FTA or the Federal Government awarded Federal assistance for this Grant Agreement.

By executing this Grant Agreement, the Recipient intends to enter into a legally binding agreement in which the Recipient:

- (1) Affirms this FTA Award,
- (2) Adopts and ratifies all of the following information it has submitted to FTA:
 - (a) Statements,
 - (b) Representations,

- (c) Warranties,
- (d) Covenants, and
- (e) Materials,
- (3) Consents to comply with the requirements of this FTA Award, and
- (4) Agrees to all terms and conditions set forth in this Grant Agreement.

Executed By:

HATTIESBURG, CITY OF



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Wes Curry, Municipal Court Judge

cc:

Date: Tuesday, January 7, 2020

Re: Authorize submission of a continuation grant application to the Substance Abuse and Mental Health Services Administration (SAMHSA) to fund the second year of the program Hattiesburg Behavioral Court Treatment Expansion, in partnership with Pine Belt Mental Healthcare Resources, in the amount of \$385,230.
File Number: 2020-11
Minute Book #

Summary

Continuation application – SAMHSA – Hattiesburg Behavioral Health Court Treatment Expansion

Recommendation Statement

I recommend authorization of submission of a continuation grant application to the Substance Abuse and Mental Health Services Administration (SAMHSA) to fund the second year of the program Hattiesburg Behavioral Court Treatment Expansion, in partnership with Pine Belt Mental Healthcare Resources, in the amount of \$385,230.

Please place this on the January 7, 2020 City Council meeting for consideration.

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Project Narrative

Description of Changes

The goal of the expansion project is to decrease substance use of HBHC participants who are living with CODs. The objectives are: 1) A minimum of 40 individuals per year will be screened and assessed to have a COD each year of the project; 2) By the end of the project period, a minimum of 30 court participants with an opiate and/or alcohol use disorder will have been enrolled in MAT; 3) By the end of the project period, a minimum of 50 court participants with COD will have participated in integrated residential treatment; 4) By the end of the project period, a minimum of 200 court participants will have accessed integrated treatment for their CODs; and 5) 100% of court participants' recovery support services will be guided by an individualized service plan (ISP) that identifies wraparound supports. HBHC will use SAMHSA funding to provide integrated recovery services to an additional 200 participants, of which 50 will be served with residential treatment slots.

No changes have been made during the first year that impacted the goals and objectives or the approaches and strategies proposed, but some flexibility was required to address challenges that arose. The hiring of program staff was initially estimated to be completed during the third month of the budget period, but the program was not fully staffed until the sixth month. However, participants were enrolled in the program by the third month as initially proposed, and this was accomplished as Pine Belt Mental Healthcare Resources was able to utilize existing staff to work with participants until project staff were hired. Additionally, the Court Administrator, who was not initially included in the project narrative as project staff, has increased involvement with the program, taking a greater role in program planning and oversight—which brings a new perspective to the table and aids in enhancing the collaborative nature of the relationship between the Municipal Court and treatment provider. The remainder of project activities have been in progress or accomplished according to the initially proposed timeline.

Progress & Evaluation

Twenty-four participants have been referred to the Hattiesburg Behavioral Health Court (HBHC) Treatment Expansion program. Ten of those referrals were assessed to have co-occurring disorders (CODs) of substance use and mental health, and have been enrolled into our HBHC Drug Court program. The potential participants were referred by a Judge, and all were prescreened and assessed for risk of recidivism and clinical need utilizing the Risk and Needs Triage (RANT), a web-based screening instrument. Participants scoring as high-risk and high-need were then moved forward to the Clinician where they were assessed for CODs. Eligible participants were enrolled in treatment and assisted in developing an individualized service plan (ISP) that identifies wraparound supports and integrated recovery services. Three individuals were referred for residential substance-use disorder treatment. As of December 2019, no participants have been referred for medication-assisted treatment (MAT).

An on-going, structured meeting of the Project Director, Clinician, Recovery Support Specialist, Peer Recovery Support Specialist, and Evaluator to discuss processes, procedures, and evaluations has been implemented. A process flow outline beginning with the judge's referral

and extending through the court-approved participation was designed. This was implemented so all partners involved can have a better view and understanding of the intersection of each individual process and its relationship to the overall process. A flow chart is being developed that will further outline the expected flow of information and reporting. Both the RANT and GPRA processes are discussed and reporting for each outlined in the project staff meetings. RANT assessments are conducted at the initial court appearance, and the GPRA information is completed after a participant has enrolled in the Behavioral Health Drug Court program. The Recovery Support Specialist and the Peer Recovery Support Specialist are responsible for completing both the RANT and the GPRA. The RANT results are shared with the Project Director, who updates court documents regularly as participants move through the program. The GPRA data is given to the Evaluator, who is responsible for reporting the GPRA data to SAMHSA.

Key Accomplishments

The program became fully staffed in November 2019. The Project Director, Clinician, and Evaluator gained valuable insight from attending the National Association of Drug Court Professionals conference in July. The Project Director also attended the Mississippi Association of Drug Court Professionals conference in August. The Peer Recovery Support Specialist completed formal training and has received the Peer Support Specialist certification from the Mississippi Department of Mental Health. Additionally, court staff have been educated on mental health issues.

The intake process was streamlined to create a more efficient system that focuses on a warm hand-off of individuals served between the court system and treatment provider. Individuals served will now have clear instructions and be prepared for their next court date. Of the 10 enrolled participants to date, special care has been given to make certain that they understand the responsibility they share in our Behavioral Health Drug Court process. Ongoing communication is one of the factors stressed to participants. They are encouraged to contact the Peer Recovery Support Specialist, Recovery Support Specialist, or the Project Director with any concerns. Two to three contacts between the bi-monthly court sessions will hopefully diminish the recidivism rates of participants. The individuals enrolled in the program have successfully attended their clinical appointments as well as Narcotics Anonymous (NA) and Alcoholics Anonymous (AA) meetings. The clinical team now holds a weekly clinical staffing, and adding this component has helped to ensure that the team maintains good communication on key clinical issues.

Adding a Peer Recovery Support Specialist and Recovery Support Specialist to the team has improved communication between participants and the court. Because the Peer Recovery Support Specialist and the Recovery Support Specialist meet the potential participants at the jail, they develop a level of communication and trust with participants before the court appearance. In some cases, they have visited participants at home and assisted them through the appointment process with the Clinician.

Court appearances are held in a conference room area of the court rather than inside the courtroom. This change allows for privacy as well as a safe place to share, ask for assistance, and hear personal concerns and receive any needed follow up from the Project Director.

Project staff members have built community relationships to enhance the types of wraparound services provided. Other community providers engaged include, but are not limited to, Southern Court Services, National Alliance on Mental Illness (NAMI), NA, AA, and Court Programs.

Problems Encountered

Working with our treatment partner, Pine Belt Mental Healthcare Resources (PBMHR), to hire suitable candidates and train project staff initially took longer than anticipated, due to the large number of applications received by PBMHR Human Resources. Our performance period start date was May 31, 2019. However, the program did not become fully-staffed until November 2019. Existing PBMHR staff were incorporated into the program to serve clients as the hiring process was underway, in order to ensure the program would have a timely start. Integrating the court processes and mental health processes has been a learning experience for everyone, but all project staff have shown dedication, resolve, and the necessary flexibility to ensure program success.

Anticipated Milestones

With the new funding we are able to provide integrated recovery services to include inpatient rehabilitation and treatment. Thirty-day inpatient treatment slots were included in our program for the first year, and this component has given us leverage with participants to enhance their treatment options. The funds allocated for residential treatment slots will be increased in the second year to allow for additional participants to receive inpatient treatment, or to extend the length of inpatient treatment to 60 days or 90 days for some participants, if needed. Extending the length of inpatient treatment will improve the likelihood of success for participants with a higher need for more intensive treatment. Additionally, while the program's initial goal was to serve 40 participants each year, we expect the actual number served to eventually grow past 40 per year, due to the caseload experienced in the short time the program has been fully underway.

Key Staff Changes

There are no key staff changes anticipated at this time.

Budget Narrative**Personnel**

Position	Name	Key Staff	Annual Salary/Rate	Level of Effort	Total Salary Charged to Award
(1) Project Director	Khadijah Muhammad	Yes	In-kind cost	50%	\$0
FEDERAL REQUEST					\$0

- The Project Director will coordinate and supervise all project activities, including recruiting and screening participants, documenting progress, and conducting meetings. The position is also responsible for collaborating with the Evaluator to collect data, assess progress, and complete required reports.

Travel

Purpose	Destination	Item	Calculation	Travel Cost Charged to the Award
(1) 2020 MS Association of Drug Court Professionals Conference	Hattiesburg, MS to Location to be Determined	Mileage	500 miles x \$0.58/mile	\$290
		Hotel	\$105/night x 3 persons x 3 nights	\$945
		Per Diem (meals & incidentals)	\$61/day x 3 persons x 4 days	\$732
(2) NAMI National Convention	Hattiesburg, MS to Atlanta, GA	Airfare	\$274/flight x 3 persons	\$822
		Hotel	\$164/night x 3 persons x 5 nights	\$2,460
		Per Diem (meals & incidentals)	\$66/day x 3 persons x 6 days	\$1,188
		Taxi/Shuttle Service	\$35/day x 6 days	\$210
		Mileage (Round trip - to Airport)	242 miles @ \$0.58/mile	\$140
		Airport Parking	\$13.65/day x 6 days	\$82
FEDERAL REQUEST				\$6,869

1. The Project Director, Judge, and Court Administrator will attend the Mississippi Association of Drug Court Professionals (MADCP) Annual Training Conference. Location and dates have not yet been determined. The MADCP Annual Training Conference offers a training curriculum with several different tracks, specifically tailored for each drug court professional and presented by leading experts in the field.
2. The Project Director, Judge, and Court Administrator will attend the 2020 National Alliance on Mental Illness (NAMI) National Convention. The convention will be held July 15, 2020 through July 18, 2020, in Atlanta, GA. The NAMI National Convention offers resources, research, and support services and recovery strategies to enhance the ability of professionals and mental health advocates to advance and sustain recovery from mental illness.

Supplies

Item(s)	Rate	Cost
(1) Risk and Needs Triage (RANT)	\$1,100 for 5 users for 1-yr term	\$1,100
(2) Office Supplies	\$100/month x 12 months	\$1,200
FEDERAL REQUEST		\$2,300

1. The Risk and Needs Triage (RANT) is a tool that will be utilized in the intake process to screen referrals for risk of recidivism, exclusionary characteristics, and motivation to change. The information obtained from this screening tool will be used, along with other information collected, to determine whether or not a referral is appropriate for the program.
2. Office supplies are the various items that will be used by the Project Director and other court staff to carry out the daily activities of the program, maintain records, and complete reporting requirements. General office supplies will include items such as pens, pencils, paper, notepads, ink cartridges, staples, paper clips, file folders, labels, envelopes, postage, etc.

Contractual

Name	Service	Rate	Cost
Court Programs, Inc.	(1) Drug Testing	780 tests/year @ \$25 each	\$19,500
Pine Belt Mental Healthcare Resources	(2) Clinician - 80%	Annual salary of \$35,000 x 80% level of effort	\$28,000
	(3) Recovery Support Specialist (RSS) - 80%	Annual salary of \$25,000 x 80% level of effort	\$20,000
	(4) Psychiatrist - 5%	Annual salary of \$240,000 x 5% level of effort	\$12,000
	(5) Evaluator - 25%	Annual salary of \$33,016 x 25% level of effort	\$8,254
	(6) Peer Recovery Support Specialist (PRSS) (100%)	Annual salary of \$20,000 x 100% level of effort	\$20,000
	(7) Fringe - 28.25%	\$88,254 salary costs x 28.25% fringe rate	\$24,932
	(9) Vivitrol	10 individuals x 12 months @ \$1,100/shot	\$132,000
	(11) Travel	6,000 miles @ \$0.50/mile	\$3,000
	(12) Clearview Recovery	14 slots (30 days each) @ \$5,000/mo.	\$70,000
	(13) Office Supplies	12 months x \$110/mo.	\$1,320
	(15) Indirect - 11.1%	\$319,506 contract total x 11.1%	\$35,465
FEDERAL REQUEST			\$374,471

- Participants will undergo random and frequent drug tests throughout the program, through a contract with Court Programs, Inc. Continued abstinence will be rewarded in court. Evidence of relapse will result in treatment plan modification and sanctions

designed to be therapeutic rather than punitive. Specific sanctions imposed will be dependent upon the number and severity of infractions.

2. The Pine Belt Mental Healthcare Resources (PBMHR) Clinician will conduct a clinical assessment with participants sentenced to HBHC. The information collected through the assessment will be used to determine whether the participant should potentially engage in outpatient, residential, or medication-assisted outpatient integrated treatment. A client-driven recovery plan will be collaboratively developed, and the Clinician will select evidence-based treatment practices that best fit the needs of the participant.
3. The PBMHR Recovery Support Specialist (RSS) will develop recovery support plans, and broker for support services. When random drug test shows evidence of relapse, the Recovery Support Specialist may report at the status hearing on environmental circumstances that may promote or be a barrier to abstinence.
4. The Psychiatrist, Dr. Baskararajan, will provide medication-assisted treatment (MAT) for those participants whose opioid use and/or alcohol use disorder is not severe enough to warrant residential treatment, but need structured intensive treatment.
5. The Evaluator will coordinate data collection and evaluate project processes & outcomes. The Evaluator will implement a routine and systematic response to data collection, ensuring that the program fully complies with all data collection and reporting requirements and that all state and federal laws are followed. The Evaluator will be responsible for entering the data into the SAMHSA portal. The Evaluator will review the performance data with the treatment team members to assess progress and improve management of the project.
6. The Peer Recovery Support Specialist (PRSS) is a member of the treatment team who self-identifies as a person in recovery from a COD, and has attended the Mississippi Department of Mental Health's Peer Support Certification class. The PRSS will assist program participants in the recovery process. The PRSS will assist with system coordination and navigation, provide recovery management check-ups, and facilitate aftercare groups. The PRSS will provide culturally competent advocacy, counseling, brokerage for supportive services, participate in wraparound planning, facilitate WRAP (Wellness Recovery Action Plan by Mary Ellen Copeland), and participate in multidisciplinary Advisory Team meetings.

7. PBMHR's fringe benefits are composed of:

Fringe Category	Rate
FICA - SS	6.20%
FICA - Medicare	1.45%
State Unemployment	1.00%
Health Insurance	14.05%
Workers Compensation	0.55%
Other (Retirement)	5.00%
Total	28.25%

The fringe benefit rate for full-time employees for year one is calculated at 28.25%.

8. Vivitrol is a medication given in a shot, once per month, to help treat alcohol dependence and prevent opioid relapse, in conjunction with counseling. It is estimated that approximately 10 participants will undergo medication-assisted treatment with Vivitrol in the first year of the project.
9. Local travel is needed to attend meetings, make home visits, and conduct project activities. Local travel rate is based on PBMHR's policies/procedures for privately owned vehicle reimbursement rate.
10. Clearview Recovery Center is a residential treatment facility, operated by Pine Belt Mental Healthcare Resources, that provides chemical dependency treatment. It is estimated that approximately 14 treatment slots of 30 days each will be needed in the second year of the program. This is a discounted rate of the normal charge of \$7,500 per month.
11. Office supplies are the various items that will be used by the staff to carry out the daily activities of the program, maintain records, and complete reporting requirements. Supplies will include assessment instruments and general office supplies such as pens, pencils, paper, notepads, ink cartridges, staples, paper clips, file folders, labels, envelopes, postage, etc.
12. PBMHR has a federally negotiated rate with SAMHSA as the cognizant agency.

Other

Item	Rate	Cost
NADCP 2021 Annual Membership Fee	\$60 x 3 persons	\$180
NAMI National Convention Registration Fee	\$270 x 3 persons	\$810
2020 MS Association of Drug Court Professionals (MADCP) Conference Registration Fee	\$200 x 3 persons	\$600
FEDERAL REQUEST		\$1,590

1. The Project Director, Judge, and Court Administrator will purchase annual memberships to the National Association of Drug Court Professionals. Membership will offer the opportunity to connect with other professionals in the field, obtain discounts on the annual conference and training programs, and obtain access to training and networking events. The benefits gained through membership will allow project staff to build upon skills and knowledge that will enhance their management of the treatment drug court program.
2. The Project Director, Judge, and Court Administrator will attend the 2020 National Alliance on Mental Illness (NAMI) National Convention. The convention will be held July 15, 2020 through July 18, 2020, in Atlanta, GA. The NAMI National Convention offers resources, research, and support services and recovery strategies to enhance the ability of professionals and mental health advocates to advance and sustain recovery from mental illness.
3. The Project Director, Judge, and Court Administrator will attend the 2020 Mississippi Association of Drug Court Professionals (MADCP) Annual Training Conference. Location and dates have not yet been determined.

Proposed Project Period

a. Start Date: 05/31/2019

b. End Date: 05/30/2024

Budget Summary

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total Project Costs
Personnel	\$0	\$0	\$0	\$0	\$0	\$0
Fringe	\$0	\$0	\$0	\$0	\$0	\$0
Travel	\$7,909	\$6,869	\$6,869	\$6,869	\$6,869	\$35,385
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Supplies	\$2,644	\$2,300	\$2,300	\$2,300	\$2,300	\$11,844
Contractual	\$371,297	\$374,471	\$374,471	\$374,471	\$374,471	\$1,869,181
Other	\$3,380	\$1,590	\$1,590	\$1,590	\$1,590	\$9,740
Indirect Charges	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	\$385,230	\$385,230	\$385,230	\$385,230	\$385,230	\$1,926,150

Funding Limitations/Restrictions

Data Collection & Performance Measurement:

Data Collection & Performance Measurement	Year 1	Year 2	Year 3	Year 4	Year 5	Total Data Collection & Performance Measurement Costs
Personnel	\$0	\$0	\$0	\$0	\$0	\$0
Fringe	\$0	\$0	\$0	\$0	\$0	\$0
Travel	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Supplies	\$0	\$0	\$0	\$0	\$0	\$0
Contractual	\$10,586	\$10,586	\$10,586	\$10,586	\$10,586	\$52,929
Other	\$0	\$0	\$0	\$0	\$0	\$0
Indirect Charges	\$0	\$0	\$0	\$0	\$0	\$0
Total Data Collection & Performance Measurement Costs	\$10,586	\$10,586	\$10,586	\$10,586	\$10,586	\$52,929

The percentage of the budget that will be spent on data collection and performance measurement does not exceed 20% for any budget period. The percentage for each budget period is 2.75% (\$10,586/\$385,230).

Medication:

Medication	Year 1	Year 2	Year 3	Year 4	Year 5	Total Medication Costs
Personnel	\$0	\$0	\$0	\$0	\$0	\$0
Fringe	\$0	\$0	\$0	\$0	\$0	\$0
Travel	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Supplies	\$0	\$0	\$0	\$0	\$0	\$0
Contractual	\$132,000	\$132,000	\$132,000	\$132,000	\$132,000	\$660,000
Other	\$0	\$0	\$0	\$0	\$0	\$0
Indirect Charges	\$0	\$0	\$0	\$0	\$0	\$0
Total Medication Costs	\$132,000	\$132,000	\$132,000	\$132,000	\$132,000	\$660,000

The percentage of the budget that will be spent on medication does not exceed 35% for any budget period. The percentage for each budget period is 34.27% (\$132,000/\$385,230).

Infrastructure development: Not applicable

HIV rapid testing: Not applicable

Viral hepatitis (B and C) testing and training: Not applicable

Recovery housing: Not applicable



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc:

Date: Tuesday, January 7, 2020

Re: Authorize submission of a grant application to the Bloomberg Philanthropies Asphalt Art Initiative grant program in the amount of \$25,000.00 to fund the placement of sidewalk and crosswalk murals at 4 locations.
File Number: 2020-13
Minute Book #

Summary

Bloomberg Philanthropies – Asphalt Art Initiative

Recommendation Statement

I recommend authorization of the submission of a grant application to the Bloomberg Philanthropies Asphalt Art Initiative grant program in the amount of \$25,000.00 to fund the placement of sidewalk and crosswalk murals at 4 locations.

Please place this on the January 7, 2020 City Council meeting for consideration.

City of Hattiesburg

Record Type: Request

Portal Contact: Kelsey Andersen

Program Contact: David Andersson

Project Title: Hattiesburg Art Walks

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▼ City Information

Applicant City:	City of Hattiesburg
Location:	Hattiesburg, MS
Lead Applicant Primary Contact	Jennifer Shows
Financial Contact	Jennifer Shows
Population (must be between 30,000 and 500,000):	46495
Current Mayor:	Toby Barker
End date of Mayor's current term:	7/1/2021
City Hall Address:	Post Office Box 1898 200 Forrest Street Hattiesburg, MS 39403-1898
City Hall Phone Number:	1-601-545-4544
Website:	www.hattiesburgms.com

In the event of any changes, please go to the Update Organization(s) Information section, select your record and click the edit button.

▼ Project Information

Please note: the deadline to submit your application is 5pm EST on Thursday, December 12, 2019.

▼ Project Team

Every application must identify a city government agency as Lead Applicant with oversight of the project, as well as a registered 501(c)3 nonprofit organization that can serve as a fiscal agent to receive funds.

In addition, each application must identify which entity or individual is responsible for

- 1) Project Management
- 2) Creative Vision

Each of these functions may be fulfilled by the Lead Applicant or Fiscal Agent, or by an additional entity (city agency, nonprofit community or arts organization, or individual artist or consultant) that are part of the Project Team. We understand that each Project Team is unique, so please do your best to represent the makeup of your team.

Please note: Fields in **bold** are required

Lead Applicant: City of Hattiesburg

Brief description of Lead Applicant's mission and primary programs:

The City of Hattiesburg was established in 1884 and has 46,495 residents across its 54 square miles. The city is currently led by Mayor Toby Barker. In 1985, the City of Hattiesburg elected its first official under the Mayor/Council form of government. The City Council is the legislative authority of the municipality and is charged with adopting laws and setting policy for the City as a whole. The City is made up of Administration, City Clerk/Tax Division, Municipal Court, Police Department, Fire Department, Parks & Recreation, Water & Sewer, Public Works, Urban Development, and Engineering.

Please provide the following details for your fiscal agent (must be a registered 501(c)3 nonprofit):

- 1) Legal Name : Hattiesburg Arts Council
- 2) Tax ID: [REDACTED]
- 3) Website: <http://www.hattiesburgartscouncil.org/>

Brief description of Fiscal Agent's mission and primary programs :

As the official arts agency of the City of Hattiesburg, the Hattiesburg Arts Council's purpose is to support, promote, sponsor, and help coordinate existing arts related activities and organizations in the community, and to establish new ones where the cultural need has not been filled. The board of directors includes fifteen outstanding leaders in our community, artists, and professional educators in the humanities. Existing programs include Emerging Artists & High School Loft Exhibit, Brown Bag Concert Series, Amateur Photo Competition for Adults & Children, smART Space, "Put Me in the Mix," fine art exhibits, performance events, and photography exhibits.

The annual Emerging Artists & High School Loft Exhibit is a competition/exhibit opportunity for emerging musicians, writers, dances, visual artists, stage performers, and more.

Brown Bag Concert Series is an event held on Thursdays in October, from 11:30am-1pm, at the City Hall Fountain. The event consists of free live music and \$7 lunches provided by local restaurants.

The Amateur Photo Competition for Adults and Children is open to amateur photographers to submit work in the categories of nature, animals, people, landscape, and design.

HAC smART Space consists of free year-round interactive art activities for all ages at area schools, outdoor festivals, and other locations.

"Put Me in the Mix" is a teen music competition and recording opportunity for Forrest and Lamar County teens ages 13-19.

Identify the entity responsible for Project Management. If it is a different entity from the Lead Applicant or Fiscal Agent, include a brief description of the entity's mission and primary programs (or a brief bio, if an individual). :

The City of Hattiesburg will be responsible for project management.

Identify the entity responsible for the Creative Vision of the project. If it is a different entity from the Lead Applicant or Fiscal Agent, include a brief description of the entity's mission and primary programs (or a brief bio, if an individual).

The Hattiesburg Arts Council will be responsible for the creative vision of the project.

If applicable, provide the names and titles of any additional individuals, government agencies, community organizations, media agencies, local businesses or other entities that will be involved in planning and implementing the project. Please list each on a separate line.

N/A

▼ Project Summary

Choose a succinct title for your project.

Hattiesburg Art Walks

Provide a brief summary of your proposed Asphalt Art Project, including your goals for the project and how it will interact with the existing site.

The City of Hattiesburg is requesting funding to place murals at 4 locations: in the area of Jackson St., Main St., and Melrose St. (the perimeter surrounding the new Hattiesburg Community Arts Center); the intersection of Bouie St. and East 7th St.; the intersection of Bouie St. and Hwy 42; and the intersection of North Main St. and Hwy 42. Sidewalk and crosswalk murals will be placed at the Hattiesburg Community Arts Center, and crosswalk murals will be placed at the three intersections. This part of an ongoing initiative to further develop artistic and cultural tourism in Downtown Hattiesburg, and increase the connectedness within the Downtown district to the Community Arts Center. Sidewalk and crosswalk murals will delineate and beautify pedestrian spaces in a town that strives to be more pedestrian-friendly, enhancing visibility and safety while attracting visitors from across Mississippi.

▼ Site Details

Choose the category that most closely defines your proposed site. Active Roadway

Provide a description of the project site(s), including your reasons for selecting it. Include information about the physical layout and characteristics, current site conditions, general volume of vehicle and/or pedestrian traffic, neighborhood/community context, and any existing initiatives or revitalization efforts on that site.

Project sites were chosen as part of an ongoing effort to further develop Downtown Hattiesburg as a cultural and artistic hub, and increase connectivity to the new Community Arts Center.

Intersections at Bouie St. & E 7th St., Bouie St. & Hwy 42, & N. Main St. & Hwy 42 lie within the Mobile-Bouie St. neighborhood, a primarily residential area with a few businesses. Much of the neighborhood lies in the AE flood zone, which has hindered redevelopment efforts. Despite the challenges, this neighborhood's historical significance is a city treasure. In the 1960s, Mobile St. welcomed supporters from throughout the country to register African-American voters during the Freedom Summer campaign. Although many contributing buildings are gone, an audio driving tour brochure was created in 2004 to keep the memory of Freedom Summer alive.

The Community Arts Center project site is in the Hub City Historic District. Buildings here have served commercial, governmental, and social functions since 1884. Jackson St., Melrose St., and North Main St. establish the perimeter surrounding the Community Arts Center, which will offer a plethora of programs, classes, and events promoting arts and arts education to residents of Hattiesburg and beyond.

Average Daily Traffic Counts
Community Arts Center: 9,800
Bouie St. & E. 7th St.: 4,830
Bouie St. & Hwy 42: 15,300
N. Main St. & Hwy 42: 15,600

List the street address or intersection of the proposed project site. Be specific regarding the location(s) of your project, including address and/or intersections, as well as latitude/longitude or GPS coordinates, if possible. If your project has multiple sites, please list each on a separate line.

1. Jackson St. & Melrose St., Hattiesburg, MS 39401; Coordinates: 31.330509, -89.292903
2. Bouie St. & E 7th St., Hattiesburg, MS 39401; Coordinates: 31.335968, -89.287230
3. Bouie St. & Hwy 42, Hattiesburg, MS 39401; Coordinates: 31.340757, -89.287061
4. North Main St. & Hwy 42, Hattiesburg, MS 39401; Coordinates: 31.341651, -89.303432

Who owns the site? If it is city-owned, please include the specific agency that is responsible for managing and maintaining this location. If your project has multiple sites, please list each owner on a separate line.

All sites are owned by the City of Hattiesburg.

▼ Project Goals

Which of the following is the highest priority for your proposed project? Revitalizing and beautifying underutilized public space

For the priority you indicated above, identify the specific baselines and measurements you will use to determine success (e.g., traffic volume, pedestrian activity, number of artists or volunteers, number of community events, etc.):

In determining the success of this project, we will consider such factors as an increase in average daily traffic volume, subjective perceptions of area pedestrian traffic volume from local business owners and residents, an increase in area business patronage and revenues, and an increase in number of new community events being held in the area. Additionally, a Downtown Walkability Study has been conducted in the past. This survey assessed the pedestrian experience in Downtown Hattiesburg related to factors such as safety, general appearance, and design/layout. This survey can be repeated periodically in the future to determine the impact of this project as well as others on improvements in those areas of the pedestrian experience Downtown Hattiesburg.

▼ Project Timeline

How long is the proposed project intended to last? :

Over 3 years

Provide a projected timeline for the following project elements. Grants will be announced in spring 2020, and the project should be installed by December 2020.

Design: April 2020 – June 2020

Artist Selection: June 2020 – August 2020

Site preparation & Installation: August 2020 – December 2020

Completion: December 2020

▼ Artist/Design Selection

Briefly describe your process for developing a design for the project, including selecting an artist/designer and what the criteria for selection will be. If an artist has already been chosen, identify them and how they were chosen.

Hattiesburg Arts Council will coordinate the artist selection process. Public forums will be organized and hosted to seek input from community members on the subject matter and design of the artwork. Next, a public call will be distributed for artist proposals. A selection committee will be developed to review and rate artist proposals. Artist proposals will be distributed to committee members, and a selection meeting will be hosted for the review of the artist proposals. Finalists will then be chosen and notified.

▼ Community Engagement

Briefly describe how you plan to engage the communities in the surrounding neighborhoods throughout the project's planning, development, and implementation? And how do you plan to gauge community support for the project? :

Public forums will be organized for the purpose of gathering the input of community members to determine the appropriate and desired subject matter for the artwork.

If applicable, briefly list any programming you will coordinate to activate the space, either city-led or in partnership with other nonprofits.

N/A

▼ Ongoing Maintenance

Depending on how long the proposed project is intended to last, briefly describe your plans for maintenance, repair, and/or deinstallation of the project.

City of Hattiesburg will manage and maintain the sites after the project is completed. Upkeep and maintenance will be provided through the city's Engineering, Parks and Recreation, and Public Works departments. Depending on the expected durability of materials used for the artwork installation, a regular maintenance/repair schedule will be developed for the artwork itself, in collaboration with the artist(s), to ensure that any needs for touch-ups, repainting, or other repair work are adequately addressed.

Amount Requested (You may request up to \$25,000):

Currency Type Selected:

USD

Application Documents

For document listed in **purple** below, click the '+' on the right and upload the corresponding document. All documents should be in PDF format. If you do not already have Adobe Reader, it can be downloaded for free [here](#).

Site Map (must be uploaded in PDF format): Attach a **single-page map that clearly indicates location, boundaries, and scale of the proposed site(s)**, as well as providing some context of the immediate surroundings. If helpful, you may sketch the boundaries of the asphalt art installation on the map. A screenshot of Google Maps satellite view is sufficient.

Site Photos (must be uploaded in PDF format): Attach a **single PDF with up to four (4) images of the project site(s) in its current condition**. Please make sure the images are large enough to view clearly (we recommend one image per page). If the proposed project is on a piece of vertical infrastructure (e.g., highway underpass, traffic barrier, utility box), indicate on at least one photo exactly where the project will be situated.

Site Owner Letter (must be uploaded in PDF format): If the site is City-owned, submit a **letter affirming jurisdiction signed by the authorized government official**. If the site is owned by a different entity or has joint ownership, submit a **letter signed by all site owners indicating agreement for the site to be used for the project**.

Budget (must be uploaded in PDF format): Please use the **Budget Template** to input your budget information. After completing the template, **please convert it to a PDF file before uploading it**.

Artist Work Samples (if applicable, must be uploaded in PDF format): If the principal artist(s) has been chosen, attach a **single PDF with up to four (4) images of prior artwork by that artist** (particular interest in public artworks). Please make sure the images are large enough to view clearly (we recommend one image per page).

Examples

APPLICATION DOCUMENTS	
 Asphalt-Art-Initiative-Budget-2019.pdf	Financials/Budget Added by Jennifer Shows at 4:12 PM on December 12, 2019
 Site Owner Letter.pdf	Letter Added by Jennifer Shows at 3:25 PM on December 12, 2019
 Site Photos.pdf	Photos Added by Jennifer Shows at 12:40 PM on December 12, 2019

APPLICATION DOCUMENTS



Site Maps.pdf

Map

Added by Jennifer Shows at 12:39 PM on December 12, 2019

Banking Documents

BANKING DOCUMENTS

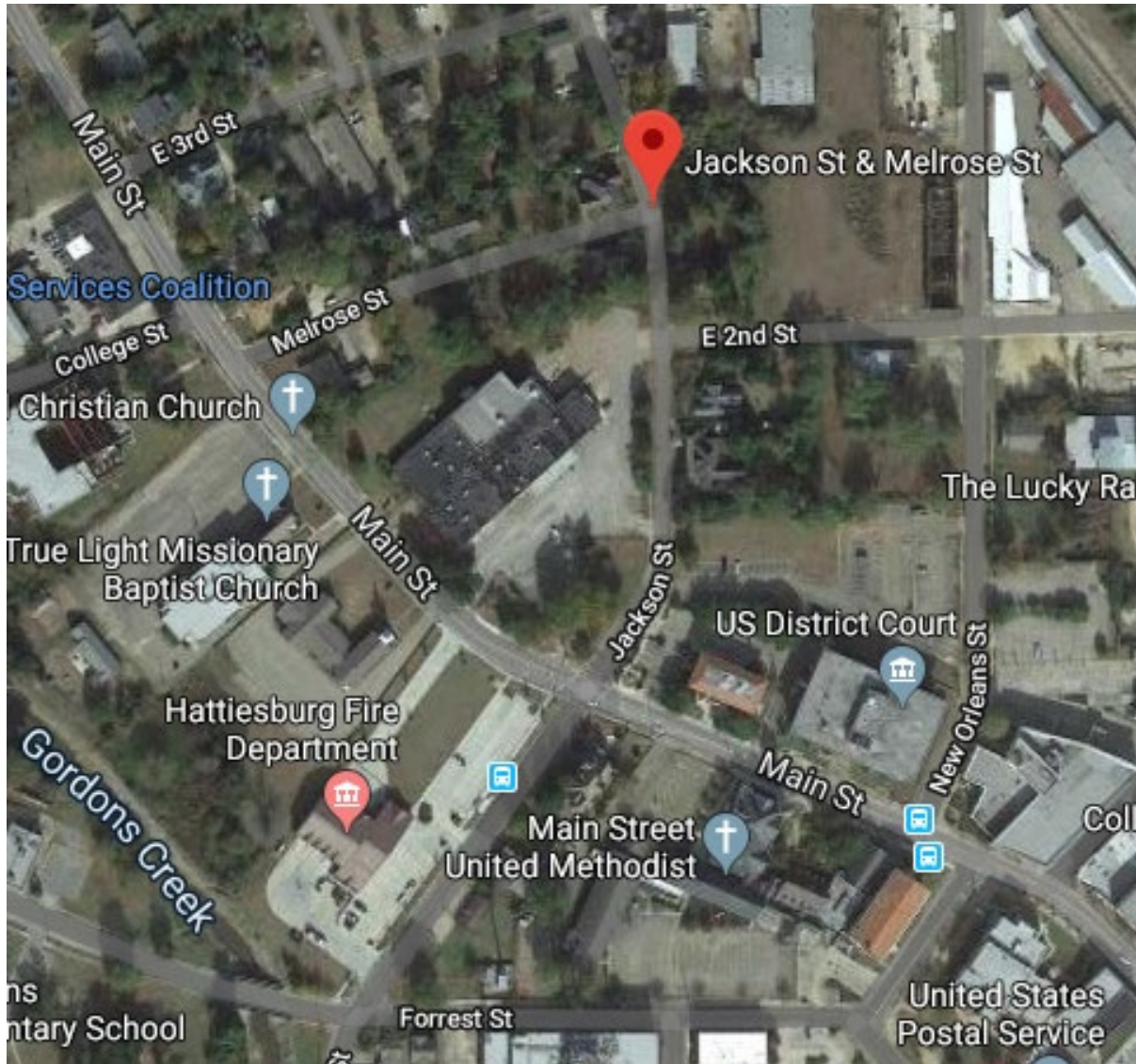
Organization Documents

ORGANIZATION-RELATED DOCUMENTS

Comments to Bloomberg Philanthropies:

Site Maps

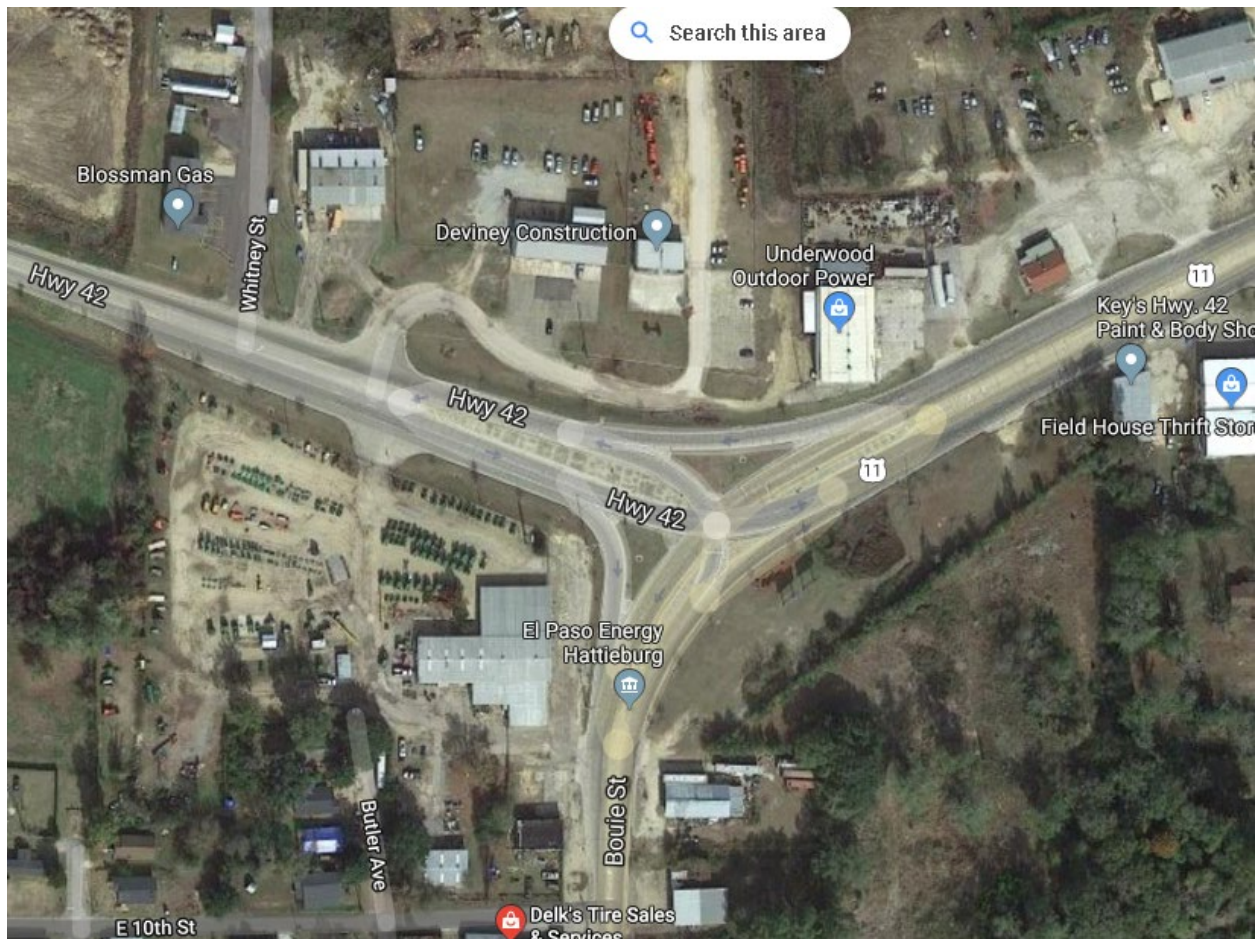
Jackson Street, Melrose Street, & Main Street: Sidewalks & Crosswalks



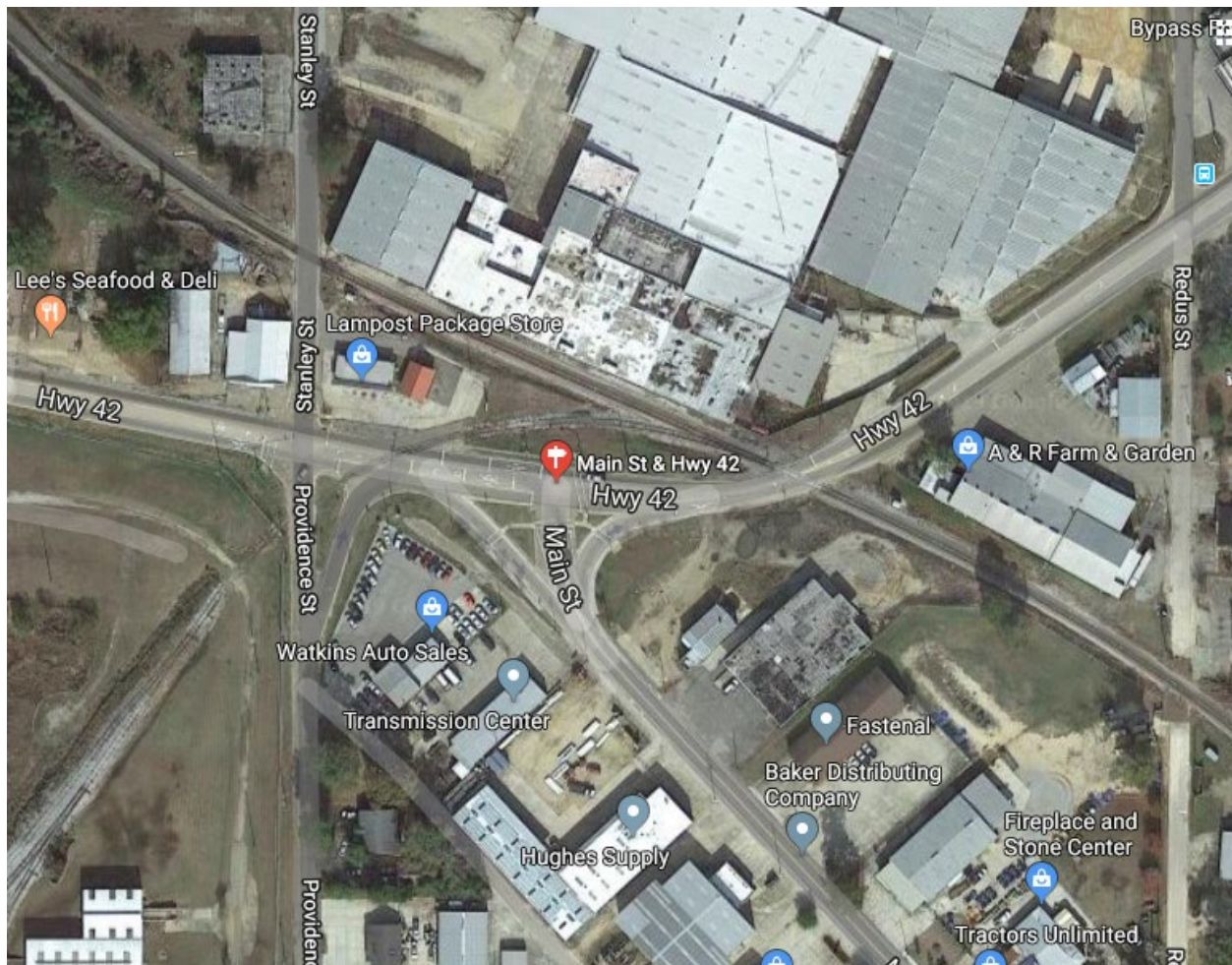
Bouie Street & East 7th Street Crosswalks



Bouie St. and Hwy 42 Crosswalks



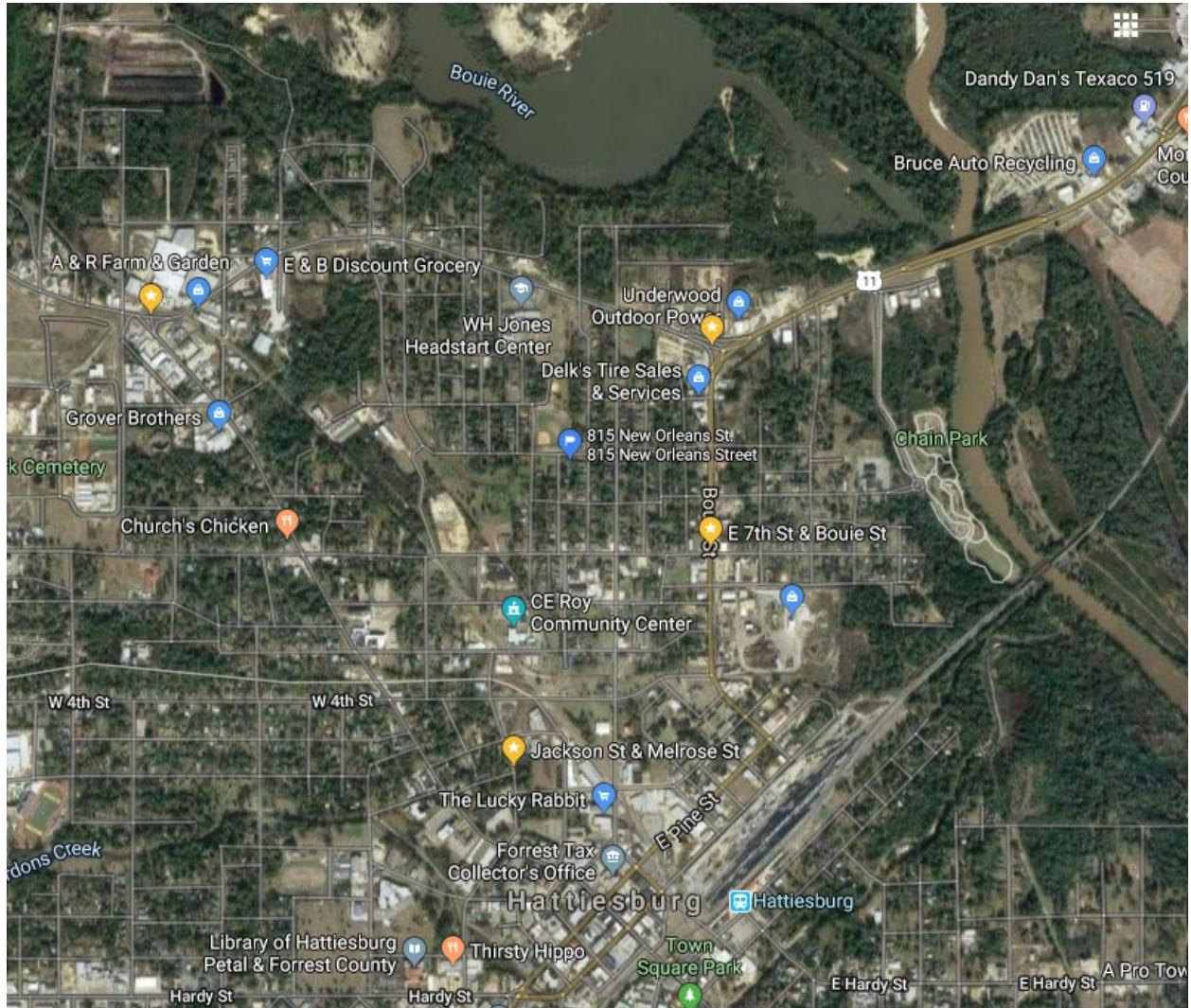
North Main Street and Hwy 42 Crosswalks



Project Overview Map



The yellow star icon represents the four project sites.



Asphalt Art Initiative: 2019 Application



Name of City:

Enter name of city below
City of Hattiesburg

Lead Applicant Name:

Enter name of city department below
City of Hattiesburg

Fiscal Agent Name:

Enter name of organization below
Hattiesburg Arts Council

Budget Narrative

Please provide a brief budget narrative in the box below summarizing key cost categories and how the budget aligns with project deliverables. Please limit your response to 250 words or less.

Enter Text Below
The City of Hattiesburg proposes to use \$20,000 in funds towards the project design, including artist fees, labor for installation of the artwork on the sidewalks and crosswalks, and traffic maintenance/control during site preparation and installation of the artwork. The City of Hattiesburg proposes to use \$5,000 in funds towards labor associated with the asphalt preparation work needed to create the crosswalk patterns and any other work needed to ready the sidewalk and crosswalk surfaces for the application of the artwork.

In-Kind Support

Please provide a brief description of any in-kind support from the municipality (e.g. permitting, repaving, installing planters or traffic barriers, or long-term maintenance). You may also specify any in-kind support from outside sources, if applicable. Please limit your response to 100 words or less.

Enter Text Below
The City of Hattiesburg and Hattiesburg Arts Council will collaborate in the planning and implementation of the project. City of Hattiesburg will provide project management and long-term maintenance, as well as some site preparation work. Hattiesburg Arts Council will coordinate forums for community input, the artist selection process, and oversee the installation of the art work.

Indirect Rate (%)

Please indicate the indirect rate requested by your organization. Indirect expenses are those that are not directly related to the program, but still necessary for the overall operations. They are usually administrative or facility-related costs such as executive suite, insurance, rent, utilities, telephone, etc. Please note that Bloomberg Philanthropies does not cover indirect costs that exceed 15% of direct expenses.

Enter Rate Below
0%

Please provide a summary of your indirect costs

Enter Text Below
N/A

Asphalt Art Initiative: 2019 Application



Submission: City of Hattiesburg: (City of Hattiesburg)

Project Budget

Category	Details (Please provide a brief description of anticipated costs in each category)	Amount (\$) (Please populate for each category)	% of Total
Design	Artist fees, installation labor, traffic control	20,000	80%
Labor	Site preparation work	5,000	20%
Supplies			0%
Other			0%
Total Direct Costs		25,000	100%
Total Indirect Costs		0	0%
Total Project Costs		25,000	

Examples:

Design: artist fees, paid labor for installation, site plan, traffic control plan, etc.

Labor: project management, volunteer organizing, community outreach, data collection, installation, etc.

Supplies: painting materials, bollards, reflective tape, marketing and outreach materials, data collection, etc.

Other: Event fees, permit fees, any other costs not referenced above.

Project Support (applicant to populate as applicable)

Funders	Amount (\$)	% of Total
Bloomberg Philanthropies*	25,000	100%
		0%
		0%
		0%
		0%
		0%
		0%
		0%
		0%
		0%
Total Project Support	25,000	
Variance	0	

* Amount to be requested from BP if application is selected as a winner. Awards are up to \$25k.



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc:

Date: Tuesday, January 7, 2020

Re: Authorize acceptance of the award for the Mississippi Department of Archives and History (MDAH) Community Heritage Preservation Grant in the amount of \$102,400.00 to fund renovations at F.B. Woodley Elementary School. The grant requires a local match of \$26,400.00 (20% of total project costs), which will be provided by Hattiesburg Public School District; and authorize the Mayor to execute in duplicate.
File Number: 2020-14
Minute Book #

Summary

MDAH Community Heritage Preservation Grant - Woodley Elementary Renovations

Recommendation Statement

I recommend acceptance of the award for the Mississippi Department of Archives and History (MDAH) Community Heritage Preservation Grant in the amount of \$102,400.00 to fund renovations at F.B. Woodley Elementary School. The grant requires a local match of \$26,400.00 (20% of total project costs), which will be provided by Hattiesburg Public School District.

Please place this on the January 7, 2020 City Council meeting for consideration.



PO Box 571, Jackson, MS 39205-0571
601-576-6850
mdah.ms.gov
Katie Blount, Director

December 10, 2019

The Honorable Toby Barker
Mayor
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

**RE: CHPG# 2019-0010
F.B. Woodley Elementary Renovations
Hattiesburg, Forrest County**

Dear Mayor Barker:

I am pleased to inform you that on December 6, 2019, the Department of Archives and History Board of Trustees approved a Community Heritage Preservation Grant to the City of Hattiesburg for \$102,400. This amount, combined with a local match of \$26,400, will create a total project budget of \$128,800. The match may be increased if necessary. The grant has been allocated under the provisions of Senate Bill 3065, *Laws of Mississippi 2019*, and will help fund the F.B. Woodley Elementary Renovations Project.

Please sign and return the enclosed certificate of acceptance by January 10, 2020, to confirm your acceptance. Roger Walker, grants administrator, Historic Preservation Division, is preparing the memorandum of agreement you will receive at the grant workshop. The grant period will run from December 6, 2019 through December 1, 2022. No extensions will be given past the deadline.

The project coordinator is required to attend the grant workshop on Friday, January 31, 2020, at 10:00 a.m. in the auditorium of the Charlotte Capers Building in Jackson in order to receive funding. At this workshop, you will receive instructions about department procedures and your responsibilities as the grantee. Please complete the enclosed form to confirm your attendance and return it with the COA by January 10, 2019. Contact us immediately if no one is able to attend.

We appreciate your continued interest in historic preservation and want you to know that we are always happy to assist with your preservation programs. If you have any questions about this grant, please do not hesitate to contact Roger Walker.

Sincerely,

A handwritten signature in blue ink that reads "Katie Blount".

Katie Blount
Director

RECEIVED

DEC 19 2019

BY: A handwritten signature in blue ink that reads "Zach Jones".

KB:mt
Enclosures

CERTIFICATE OF ACCEPTANCE

The City of Hattiesburg hereby certifies that we will accept a **\$102,400** Community Heritage Preservation Grant award with a required local match of **\$26,400** for the F.B. Woodley Elementary Project.

We understand that the deadline is December 1, 2022 and that extensions will not be given on late or incomplete projects, and may result in loss of funds.

Signature, Title

CITY OF HATTIESBURG

Organization/Public Entity

1/07/2020

Date

CERTIFICATE OF NON-ACCEPTANCE

(Please **DO NOT** sign this section if you are accepting the award.)

The City of Hattiesburg regrets that we cannot accept a **\$102,400** Community Heritage Preservation Grant award at this time.

Signature, Title

Organization/Public Entity

Date



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ann Jones

cc:

Date: Tuesday, January 7, 2020

Re: Ratification of submitted grant application to the American in Bloom/CN Railway “EcoConnexions from the Ground Up” grant program, to fund tree and ornamental plantings along Eastside Avenue, for a total project cost of \$50,000 (\$24,750 AIB/CN grant contribution/\$25,250 local match).
File Number: 2020-12
Minute Book #

Summary

American in Bloom/CN Railway “EcoConnexions from the Ground Up” Grant Program

Recommendation Statement

I recommend authorization of submission of a grant application to the American in Bloom/CN Railway “EcoConnexions from the Ground Up” grant program, to fund tree and ornamental plantings along Eastside Avenue, for a total project cost of \$50,000 (\$24,750 AIB/CN grant contribution/\$25,250 local match).

Please place this on the January 7, 2020 City Council meeting for consideration.

From: [America in Bloom](#)
To: [Shows, Jennifer](#)
Subject: CN/AIB Grant Proposal Submission
Date: Tuesday, November 26, 2019 2:44:51 PM

Thank you for your submission. Will notify you around December 31 of the status.

CN/AIB Grant Proposal Submission

Project Name *	City of Hattiesburg – Eastside Avenue Enhancements
Amount Requested (up to \$25,000) *	24750
Name of organization/entity submitting proposal *	City of Hattiesburg
Your Name *	Jennifer Shows
Your title *	Grant Coordinator
Address	☐ 200 Forrest Street P.O. Box 1898 Hattiesburg, MS 39403–1898 United States
Phone Number *	(601) 545–4544
Email *	jshows@hattiesburgms.com
Please indicate the type of organization/entity submitting proposal *	Municipality
If this application is being submitted in collaboration with another group(s), please list and explain.	n/a
Estimated number of trees to be planted *	150
Estimated number of shrubs, groundcovers, and/or flowers to be planted *	300
Species of trees, shrubs, groundcovers, and flowers to be planted. *	Various species

Describe the proposed project in detail. Please explain how assistance from the CN EcoConnexions – From the Ground Up grant program will enhance your community's environmental, social health, and well being. (1,000 words max) *

The City of Hattiesburg proposes to enhance the corridor along Eastside Avenue that parallels the Canadian National rail line and JC Killingsworth Drive. The overall project would include the

installation of both tree and ornamental plantings to improve the aesthetic appearance of the area.

This project will contribute to the improvement of stormwater run-off by creating root systems from both the trees and the planter areas where none currently exist. The project also will establish a vegetative buffer for adjacent business from the CN rail line. Sidewalks will be installed as an indirect part of this project by the City of Hattiesburg. The City will provide the maintenance of these plantings and will have them added to the Parks and Recreation weekly maintenance schedule.

A beautification project in this area will help to create an attractive public space that can welcome and be admired by visitors, elicit a sense of pride in Hattiesburg residents, and improve air and water quality along with public health. Promoting community pride among residents will persuade residents to respect their neighborhoods and encourage the maintenance of clean, attractive private properties. This beautification effort also coincides with Hattiesburg's desire to become a more walkable, pedestrian-friendly city. The City will install sidewalks to complement the plantings, and the beautification efforts will provide a more attractive, inviting, and appealing pathway to encourage pedestrian and bicycling activity. Trees will also provide shade to pedestrians and bicyclists. Furthermore, increasing the visual appeal of the project area will ultimately serve to encourage public and private investments in the area, boosting economic success in the community.

Describe how your community will be involved in the program, including planning, design, construction, and maintenance. How are your community volunteers and volunteer organizations expected to participate? (1,000 words max) *

The City of Hattiesburg has an ongoing partnership with Keep Hattiesburg Beautiful to host community volunteer projects that promote civic pride and beautification. The project area can be targeted in future clean-up and beautification events.

Describe how the project addresses environmental challenges and how it will be sustained. Please include how the project will receive ongoing maintenance. (1,000 words max) *

This project will contribute to the improvement of stormwater run-off by creating root systems from both the trees and the planter areas where none currently exist. The project also will establish a vegetative buffer for adjacent business from the CN rail line. The City of Hattiesburg will provide all maintenance and upkeep of these plantings by adding them to the weekly maintenance schedule of the Parks and Recreation Department.

Describe how America in Bloom and the program sponsor, CN EcoConnexions – From the Ground Up, will be recognized for their contribution. Please include information on logo usage, launch events, press conferences, etc. As an inauguration event is required, please indicate how your community would envision the event. (1,000 words max) *

America in Bloom and CN EcoConnexions – From the Ground Up will be given credit for the funding provided in any public announcements about the project. Information regarding grant-funded projects is typically shared via news outlets and social media. An inauguration event would consist of a press conference to announce and describe the project to the public and media.

Describe how you will measure the project's success. How will the project be evaluated for success? How will you share the results of your project? Note, in order to receive payment, you will be required to submit a final report to America in Bloom. *

The program's success can be evaluated through community surveys, dialogues with residents, number of new residents to the area, number of new businesses to the area, and revenue increases for existing businesses. Project results will be shared in a progress report to American in Bloom.

Attach budget document (10 MB limit)

*



[america_in_bloom_grantbudget_2019.xlsx](#)

10.79 KB • XLSX

Attach a File



[america_in_bloom_grantbudget_2019.pdf](#)

100.41 KB • PDF

America In Bloom/CN Railway "EcoConnexions From the Ground Up"

City of Hattiesburg

Proposed Budget

Item Description	Quantity	Price per Item	City Contribution	CN/AIB Grant Contribution
Trees-15 Gallon B/B Various Species	150	\$ 75.00		\$ 11,250.00
Ornamental Shrubs-3 Gallon Various Species	300	\$ 25.00		\$ 7,500.00
Site and Bed Prep			\$ 2,500.00	
Labor to Install Tree & Plant Material			\$ 18,750.00	
Mulch			\$ 3,500.00	
Gator Water Bags	150	\$ 40.00		\$ 6,000.00
Labor to Install Water Bags/Fill			\$ 500.00	
Total			\$ 25,250.00	\$ 24,750.00
Project Total				\$ 50,000.00



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, January 7, 2020

Re: Approve Plans and Specifications for the Comprehensive Sewer Improvements Cross Creek Parkway Pump Station Rehabilitation project and Authorize advertisement for bids for same.
File Number: 2020-7
Minute Book #

Summary

Approve Plans and Specifications for the Comprehensive Sewer Improvements Cross Creek Parkway Pump Station Rehabilitation project and Authorize advertisement for bids for same.

Recommendation Statement

I recommend approval of this project.

Please place this on the January 7, 2020 City Council meeting for consideration.

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 February 20, 2020** in the City Clerk's Office in the City Hall of said City for furnishing the City's requirements for the following:

**COMPREHENSIVE SEWER IMPROVEMENTS
CROSS CREEK PARKWAY PUMP STATION REHABILITATION
HATTIESBURG, MISSISSIPPI**

Plans, Specifications and proposal forms may be obtained from Shows, Dearman & Waits, Inc., 301 Second Avenue, Hattiesburg, Mississippi, 39401, upon deposit of \$200.00, 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:

**COMPREHENSIVE SEWER IMPROVEMENTS
CROSS CREEK PARKWAY PUMP STATION REHABILITATION
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 7th day of January A.D., 2020.

CITY OF HATTIESBURG, MISSISSIPPI
BY:
Kermas Eaton, City Clerk

Publish on January 15 and January 22, 2020
City of Hattiesburg
Return PROOF to City Clerk's Office
PO Box 1898
Hattiesburg, MS

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

COMPREHENSIVE SEWER IMPROVEMENTS
CROSS CREEK PARKWAY PUMP STATION REHABILITATION

FOR THE

CITY OF HATTIESBURG

DECEMBER, 2019

PREPARED BY:

SHOWS, DEARMAN & WAITS, INC.
CONSULTING ENGINEERS

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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 February 20, 2020 in the City Clerk's Office in the City Hall of said City for furnishing the City's requirements for the following:

**COMPREHENSIVE SEWER IMPROVEMENTS
CROSS CREEK PARKWAY PUMP STATION REHABILITATION
HATTIESBURG, MISSISSIPPI**

Plans, Specifications and proposal forms may be obtained from www.sd-wprojects.com, upon deposit of \$200.00, non-refundable. All plan holders are required to have a valid email address for registration. Any questions regarding website registration or online orders should be directed to Plan House Printing at 601-336-6378. 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:

**COMPREHENSIVE SEWER IMPROVEMENTS
CROSS CREEK PARKWAY PUMP STATION REHABILITATION
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 7th day of January A.D., 2020.

CITY OF HATTIESBURG, MISSISSIPPI
BY: _____
Kermas Eaton, City Clerk

Publish on January 15 and January 22, 2020
City of Hattiesburg
Return PROOF to SDW, Inc.
301 Second Avenue
Hattiesburg, MS 39401

INFORMATION FOR BIDDERS

BIDS will be received by CITY OF HATTIESBURG, MISSISSIPPI herein called the "OWNER", at City Hall until 10:00 a.m. on February 20, 2020, 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 **COMPREHENSIVE SEWER IMPROVEMENTS – CROSS CREEK PARKWAY PUMP STATION REHABILITATION** 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 dates 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, Mississippi .

PROPOSAL FORM

I (we) agree to begin work within (10) calendar days after the issuance of Work Order, and to complete the work within 300 calendar days thereafter.

It is understood that the quantities of work listed for unit prices bid are approximate, and are intended to merely indicate the general scope of the various items entering into the complete work. It is further understood and agreed that the Owner may increase or decrease the quantities listed in the Proposal to an extent equivalent to 30% of the bid price (in dollars) and that no change in the unit prices proposed shall be occasioned thereby.

The undersigned further agrees that the unit and lump sum prices quoted include all items of work required or necessary for the accomplishment of the projected work and that these items include all work indicated on the Plans and Specifications for which no specific pay items have been established.

All labor, materials, services and equipment necessary for the completion of the work as indicated on the plans and specifications and other contract documents for the sum of:

_____ DOLLARS AND _____ CENTS
(Words) (Words)

(\$ _____).
(Figures)

The undersigned certifies that the lump sum price contained herein have been carefully checked and are submitted as correct and final.

If within thirty (30) days the scheduled closing time for receipt of bids, this Proposal is accepted, the undersigned will execute a formal contract within seven (7) 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,

Name of Firm or Bidder

By: _____

ADDRESS

BID BOND

KNOW ALL MEN BY THESE PRESENTS: that we, the undersigned, Principal, and _____ as Surety, are hereby held and firmly bound unto _____ as Owner in the penal sum of _____ for payment of which, well and truly made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 20__.

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

COMPREHENSIVE SEWER IMPROVEMENTS CROSS CREEK PARKWAY PUMP STATION REHABILITATION

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.

_____(L.S.)
PRINCIPAL

SURETY

BY: _____

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.

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

COMPREHENSIVE SEWER IMPROVEMENTS CROSS CREEK PARKWAY PUMP STATION REHABILITATION

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 \$ 750.00 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 ten percent (10%) 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 thirty (60) days 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:

City of Hattiesburg_____

SEAL

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 _____, (hereinafter called the Obligee), a _____ Corporation 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 hereto 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 COMPREHENSIVE SEWER IMPROVEMENTS – CROSS CREEK PARKWAY PUMP STATION REHABILITATION 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 thereunder, 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, or 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

WITNESSES: _____
SURETY
ADDRESS

Name of person executing for Surety
Title

NOTICE OF AWARD

TO: _____

Project: COMPREHENSIVE SEWER IMPROVEMENTS – CROSS CREEK PARKWAY
PUMP STATION REHABILITATION

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: _____ Signature: _____

NOTICE TO PROCEED

TO: _____ DATE: _____

Project: COMPREHENSIVE SEWER IMPROVEMENTS – CROSS CREEK PARKWAY
PUMP STATION REHABILITATION

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 300 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: _____

Signature: _____

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, Instructions 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 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, Instructions 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 must 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 with 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 therefrom; 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 therefrom 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 therefor 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 therefor 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 thereunder. 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 file a claim in a court with local jurisdiction 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, However, no request for a claim 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 a claim 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 arbitration is sought; and the failure to request a claim 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 judicial proceedings have been initiated, such decision may be entered as evidence but shall not supersede the judicial 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 therefor 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, weather 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 manufacturers 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 materialmen, 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 therefor 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 (60) 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, materialmen, 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 therefor 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 arbitrators 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 thirty (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 thereunder, 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.

MEASUREMENT AND PAYMENT

Construction of this project shall include all items noted in the plans and specifications. The project shall include all materials, labor and equipment to construct a fully functioning sewer pump station. The project shall include the removal of existing items including but not limited to casing, generator, electrical components, control panel, etc. New items for construction of the project shall include manholes, water and sewer service, electrical and natural gas service, concrete lift station and valve pit, three submersible pumps, piping, valves, control panels, force main, gravity sewer line, tracer wire system, control building, generator, concrete pavement, guardrail, fire hydrant, fill material, chain link fence, erosion control, crushed aggregate and other misc. items as required on the plans and specifications.

TECHNICAL SPECIFICATIONS

SANITARY SEWERAGE 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 sewer 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 this 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 139/139M Electric-Fusion (Arc) Welded Steel Pipe (HPS 4 inch and over).
- A 252 Welded and Seamless Steel Pipe Piles.
- C 31/C 31M Making and Curing Concrete Compressive and Flexural Strength Test Specimens in the Field.
- C 33 Specifications for Concrete Aggregate
- C 39/C 39M Compressive Strength of Cylindrical Concrete Specimens.
- D 1248 Polyethylene Plastics Extrusion Materials for Wire and Cable
- D 1784 Rigid Poly(Vinyl Chloride)(PVC) Compounds and Chlorinated Poly (Vinyl Chloride)(CPVC) Compounds.
- D 2412 Determination of External Loading Characteristics of Plastic Pipe by Parallel Plate Loading.
- D 2922 Density of Soil and Soil Aggregate in place by Nuclear Methods (Shallow Depths).
- D 3034 Specifications for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
- D 3212 Joints for Drain and Sewer Plastic Pipes using Flexible Elastomeric Seals.
- F 477 Specifications for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

F 794 Poly (Vinyl Chloride)(PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

A21.10 Ductile Iron Fittings, 3 inch through 48 inch for Water and other Liquids.

A21.11 Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.

A21.50 Ductile Iron Pipe, Design Requirements

A21.51 Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-lined Molds, for Water or other Liquids.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

C 104 Cement-Mortar Lining for Ductile 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 Ductile Iron Fittings, 3 inch through 48 inch, for Water and Other Liquids.

C 111 Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.

C 151 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 Current 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 and bear on the submittal a certification from the Contractor the submittal is in conformance with the specifications.

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.

3.2 PVC Pipe: The Contractor shall submit manufacturer's certificate which certifies the pipe and fittings conform to the requirements as specified hereinafter under Article 4.0, Materials. In addition, the Contractor shall submit the following:

A. PVC Piping: PVC Pipe shall be sampled, tested, and inspected in accordance with the provisions of ASTM D3034. Copies of test results shall be attached. Test results shall be similar material and not be more than one year old from the date of material delivery.

B. Joints: The following submittals shall be required for PVC joints.

1. Certificate with test results for joints for compliance to ASTM D 3212. Gaskets shall conform to ASTM F 477. Test results shall be for similar material and not be more than one year old.

4.0 MATERIALS

4.1 Gravity Sewer Pipe: Where the type of gravity sewer piping is not indicated on the plans, the Contractor shall furnish polyvinyl chloride (PVC) pipe.

The Contractor shall be restricted to furnishing the exact type of pipe material where indicated on the Contract Drawings.

The Contractor shall be limited to the use of only one type of pipe (so selected by the Contractor and indicated on the Proposal Form) and shall not change the type of gravity sewer pipe except as follows:

1. Where indicated on the plans, or
2. If permitted in writing by the Engineer.

A. **Ductile Iron Pipe:** Ductile iron shall be designed in accordance with the latest revision of ANSI/AWWA C150/A21.50 for a minimum 50psi.

Ductile Iron Pipe shall be manufactured in accordance with the latest revision of ANSI/AWWA C151/A21.51. Each pipe shall be subjected to a hydrostatic pressure test of at least 500 psi at the point of manufacture.

Pipe shall be standard asphaltic coating on the exterior. Pipe shall also have 40 mils of Protecto 401 Ceramic Epoxy on the interior per "Standard Specification for Lining Ductile Iron Pipe for Sewer Service".

The class or nominal thickness, net weight without lining, and casting period shall be clearly marked on each length of pipe. Additionally, the manufacturer's mark, country where cast, year in which the pipe was produced, and the letters "DI" or "Ductile" shall be cast or stamped on the pipe.

All pipe shall be furnished with Push-On Type Joints, such as Tyton or Fastite. Joints shall be in accordance with ANSI/AWWA C111/A21.11, of latest revision, and be furnished complete with all necessary accessories.

Fittings shall be ductile iron. Fittings shall conform to the latest revision of either ANSI/AWWA C600.

B. **PVC Pipe :** PVC gravity sewer pipe and fittings shall conform to the requirements of ASTM D 3034 with an SDR of 26 and a minimum stiffness of 46 lb./in. - in and 115 lb./in. - in, respectively. Joints for sewer pipe shall be either push-up or mechanical conforming to the requirements of ASTM 3212. Gaskets for sewer pipe shall conform to the requirements of ASTM F 477.

Approved adaptors shall be used for making connections between PVC pipe and

concrete manholes. Pipe connections to new manholes shall be made using a flexible synthetic rubber boot mechanically clamped to the manhole and to the pipe to provide a watertight seal.

C. Service Laterals: Service laterals for local services shall consist of fittings, pipe lengths, and connections of 6 inch or 4 inch pipe. The fittings, pipe lengths and plugs shall be of the same material as the run pipe unless otherwise indicated on the Contract Drawings. The modified sewer tees shall be an integral part of the run pipe. The remainder of the branch shall consist of standard fittings (elbows, reducers, and lengths of pipe) in accordance with the manufacturer's standard products and as specified. Pipe lengths and joint connections shall meet the specified requirements for the type materials used.

4.2 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 sewer pipe or force main and make proper connections at the ends. Minimum Wall Thickness for steel casing is 0.25 inch. (Hwy) and 0.28 inch (RR). Contractor shall verify the I.D. of the casing pipe is adequate for the carrier pipe prior to installation.

4.3 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:)

SIZE NO. 467

<u>Nominal Size</u> <u>(Sieves w/Square Openings)</u>	<u>Percent Passing by Weight</u>
2"	100
1 - ½"	95 - 100
¾"	35 - 70
⅜"	10 - 30
No. 4	0 - 5

4.4 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 1 - ½" sieve.

4.5 Clay Gravel Material: Clay Gravel Material shall meet MDOT Specifications, Group

4.6 Concrete: Concrete shall be in accordance with the requirements of Technical Specifications - CONCRETE

4.7 Select Fill Material: 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. Material shall meet the Standard Specifications for Road and Bridge Construction, Latest Edition for Class 9 Group C and modified to consist of a P.I of between 5 and 15.

4.8 Backfill: All other backfill shall consist of excavated material removed from the trench unless otherwise directed by the Engineer. CONTRACTOR shall separate poor and acceptable material during excavation. Failure to separate material shall require CONTRACTOR to furnish acceptable backfill at no additional cost to the project. Unacceptable material shall be disposed of off-site at the Contractor's expense.

5.0 CONSTRUCTION:

5.1 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.

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.

Where possible, Contractor shall remove turf in sections, keep damp, and replace upon completion of backfilling.

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 at his expense. 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. In the event trench width is wider than allowed on the plans, Contractor shall absorb the cost of additional wash gravel bedding based on neat line quantity calculations.

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.

If adequate area is not available on the construction site, the Contractor will be required to stockpile material off site. Owner shall not bear any additional expense.

Ledge Rock, boulders and large stones shall be removed to provide a minimum clearance of 4 inches (10 cm) below and on each side of all pipes.

It is the intention of these specification that there shall be a minimum interruption to traffic and all traffic control shall be in accordance with the MUTCD.

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 sewer 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 shall be 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 pipe laying operation.

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 wash gravel bedding 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 subgrade 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 subgrade is found to be unstable or to include ashes, refuse, organic material, or other unsuitable material, the Engineer may direct that the subgrade 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 a 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, grade, and cross section with proper bell holes at each joint to ensure 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.
- 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 Technical Specifications - RESTORATION OF ROADS, DRIVEWAYS, FENCES, LAWNS, AND OTHER GRASSED AREAS.

5.2 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.

5.3 PIPE LAYING: Pipe laying shall proceed upgrade with the spigot ends of the bell-and-spigot pipe and tongue ends of the tongue and groove pipe jointing in the direction of flow. Each pipe shall be laid true to line and grade and in such a 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 sewer 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.

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.

The Contractor shall utilize a commercial grade laser beam specifically manufactured to aid in maintaining grade and alignment of pipelines during installation. The primary unit shall be mounted on a heavy duty base and firmly anchored in the downstream manhole of the reach under construction. The maximum distance shall not exceed four hundred feet (400') per set-up without the approval of the Engineer.

Each joint of pipe shall be installed using an approved target to align the pipe with the projected laser beam. The methods and procedures shall be in strict accordance with the manufacturer's recommendations and instructions. Proper ventilation shall be maintained at all times. Care shall be exercised in order to prevent bumping or misalignment of the projected beam. Sewer lines shall be laid such that the installed variation of invert elevations when compared with the construction plans does not exceed 0.05 feet. Sewer lines in which said variation exceeds 0.05 feet may be rejected. Sewer pipe shall be visually inspected for alignment by lamping, televising or by other appropriate means to determine alignment.

Whenever a movable steel box is used in place of sheeting, the Contractor shall take care to prevent the pipe from moving when the steel box is moved.

5.4 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.

A. PVC Pipe Joint Construction: The bell and spigot ends of PVC sewer pipe shall be cleaned of all foreign material that could interfere with proper assembly of the joints. The spigot

ends shall be cleaned one inch (1") beyond the joint assembly reference mark.

The spigot end of the pipe shall be thoroughly lubricated in accordance with the manufacturer's recommendations. The coating should be the equivalent of a brush coat of enamel paint and maybe applied by hand, cloth, pad sponge or glove.

The lubricated spigot end shall be inserted into the bell keeping the pipe length in proper alignment. The bell shall be braced while the spigot end is pushed in under the rubber ring, so that previously competed joints in the line will not be closed up. The spigot end shall be pushed into the bell until the reference mark is flush with the end of the bell. Pipe shall be pushed by use of a bar or other means approved by the Engineer. Hydraulic excavators, backhoes, or other machinery shall not be used to push slip-joint pipe together.

Generally, the installation and jointing of PVC Pipe shall conform to the requirement so the latest edition of ASTM D-2321, "Underground Installation of Flexible Thermoplastic Sewer Pipe".

Any pipe cuts shall be of neat line. Pipe shall have bevel edges according to the manufacturer's recommendations.

B. Ductile Iron Pipe Joint Construction: The installation and jointing of ductile iron pipe and 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.

C. Jointing Dissimilar Pipes: Suitable adaptor couplings are required for connecting dissimilar pipes. The couplings shall be approved by the Engineer before installation.

5.5 STREAM CROSSING: Ductile iron pipe Class 50 shall be used as shown on the Drawings. Granular fill, concrete, and concrete collars shall be placed or constructed as shown on the contract drawings.

5.6 SERVICE LATERALS (LINES): Modified sewer tees shall be installed on the run pipe at the appropriate field locations. Service lines of the sizes specified shall be laid to a uniform grade so that the customer being served can be tied-in using good construction practices. All tamping and backfilling operations shall be performed the same as on main line pipe. Removable plugs shall be securely installed in pipe ends and a 2" x 2" treated post extending 12" above the ground line shall mark the pipe end location if the lateral is not connected to an existing sewer. For service laterals in which a connection to an existing service is required, the Contractor shall make the connection. Contractor shall verify the location of all service laterals within the project area prior to construction.

5.7 BORINGS: Borings shall be accomplished in accordance with Mississippi Standard Specifications for Road and Bridge Construction or Railway 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.

A. 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 water tight.

B. 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.

C. 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 surcharged sewage conditions.

D. Casing Seal: The annulus between the casing and carrier pipe shall be sealed at each end with a quick setting grout.

5.8 RELATION TO WATER MAINS:

A. 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.

5.9 CONTINUATION OF SERVICE

The existing wastewater system shall remain in operation during the duration of the project until such time it is no longer needed. Should removal of facilities from operation become necessary, a plan which will avoid or minimize pollution effects on any receiving stream and provide alternate service for wastewater facilities shall be reviewed and approved in advance by the Mississippi Department of Environmental Quality and shall be adhered to during construction.

Where shown on the plans or directed by the Engineer, new sewers shall be connected to existing sewers either by constructing a manhole over an existing line (doghouse) or by coring through the wall of an existing manhole.

6.0 TESTING

6.1 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.

6.2 PVC PIPING: Material test shall be conducted during the manufacturing process and the results shall be included as part of the submittal. No other material test shall be required.

6.3 STEEL CASING PIPE: Material test shall be included as part the submittal. No other material test shall be required.

6.4 BEDDING MATERIAL AND STABILIZATION MATERIAL: Test for gradation and test for material passing the No. 40 sieve shall be as follows:

Gradation	- AASHTO T 88
Liquid Limit	- AASHTO T 89
Plasticity Index	- AASHTO T 90

One set of each test listed above will be required for every 500 cubic yards or major fraction thereof.

6.5 COMPACTION TESTS: Compaction tests shall be performed in accordance with AASHTO T191 and ASTM D 2922. Maximum compaction shall be determined in accordance with AASHTO T99.

CONTRACTOR shall establish a compaction method or pattern which results in the proper density for the material utilized in the backfill operation. CONTRACTOR shall verify the compaction method by testing each lift for density in the first run of pipe to be laid. Upon satisfactory performance and approval of the ENGINEER the established compaction method shall be used for compaction of each lift of similar material.

The CONTRACTOR shall provide additional density testing to verify the compaction effort; twice in random locations as selected by the ENGINEER every 1,500 linear feet of pipe, if there is a

change in material, or if in the sole opinion of the ENGINEER the compaction effort is not yielding the proper results.

(Number of Compaction Tests)

AASHTO T-99	
AASHTO T-191	or
ASTM D 2922	
Select Backfill Material OR	
Stabilization Material	1
One per 100 CY	
Bedding Material	2
One per 600 LF	
Tamped Backfill	2
One per 600 LF	

6.6 INFILTRATION/EXFILTRATION/LAMP TEST: The Contractor shall provide all plugs, water supply, measuring devices, and all other equipment, material, labor and supervision to measure the infiltration and exfiltration tests as specified below. The Contractor shall perform the test in the presence of the Engineer. All gravity sewer pipe shall be tested in accordance with the following applicable requirements.

A. Infiltration Test: The infiltration test shall be conducted between adjacent manholes. The outlet pipe on the downstream manhole shall be plugged and tested for water tightness to the satisfaction of the Engineer. The accumulated depth of water in the downstream manhole shall be read at 12 hour intervals for two (2) days and the infiltration rate calculated from the data obtained. Any section exceeding an infiltration rate of 200 gallons/day/inch diameter/mile shall be relayed at the Contractor's expense. This means that the Contractor shall locate and repair leaks as necessary to pass the infiltration test. Infiltration test shall be utilized only when ground water is above pipe.

B. Low Pressure Air Test: Air test shall be conducted in strict accordance with the manufacturer's instructions, including all recommended safety precautions. Equipment used for air testing shall be specifically designed for such and include a monitoring gauge with 0 to 5 psi with a minimum division of 0.1 psi and an accuracy of no less than 0.05 psi

1. Air testing shall be conducted for completed gravity sewer mains
2. After an internal pressure of 4.0 psi is obtained, allow at least 2 minutes for pressure to stabilize, adding only the amount of air necessary to maintain pressure. After stabilization period, adjust the pressure to 3.5 psi and valve off air supply.
3. Determine the minimum pressure holding time allowed for pressure to drop from 3.5 psi to 3.0 psi as shown on the table below.

Minimum Holding Time for Low Pressure Air Test

Nominal Pipe Size (inches)	Time per 100 ft.
6	42 sec.
8	1 min. - 12 sec.
10	1 min. - 30 sec.
12	1 min. - 48 sec.
15	2 min. - 6 sec.
18	2 min. - 24 sec.
21	3 min.
24	3 min. - 36 sec.
27	4 min. - 12 sec.

30	4 min. - 48 sec.
33	5 min. - 24 sec.
36	6 min.

C. Visual Test: Gravity sewer lines will be lapped and shall show a true line between manholes without defects in conditions, grade, or alignment. Any defective lines shall be subject to a closed-circuit television inspection performed at the Contractor's expense.

6.7 DEFLECTION TESTS: 100% of the PVC gravity sewer mains shall be tested 30 days after the final backfill has been in place by the following method:

Use a "Go-, no-go" mandrel which is sized to such dimensions that it will not "go" when encountering a deflection greater than 5%. The instructions for its use are as follows:

A. Completely flush the line making sure the pipe is clean of any mud or debris that would hinder the passage of the mandrel.

B. During the final flushing of the line, attach a floating block or ball to the end of the mandrel, pull rope and float the rope through the line. (A nylon ski rope is recommended)

C. After the rope is threaded through the line, connect the pull rope to the mandrel and place the mandrel in the entrance of the pipe.

D. Connect a retrieval rope to the back of the mandrel to pull it back if necessary.

E. By hand, remove all the slack in the pull rope and place a tape marker on the top at the end of the pipe where the mandrel will exit, determining the location of the mandrel in the line.

F. By hand, draw mandrel through the sewer lines. If any irregularities or obstructions are encountered in the line, they shall be corrected by the Contractor.

G. If a section with excessive deflection is found, locate it; dig down and uncover the pipe; if any damaged pipe is found, replace it; if pipe is not damaged, realign and thoroughly tamp haunching and initial backfill; replace remainder of backfill.

H. Re-test this section for deflection after 30 days from initial testing.

STANDARD SPECIFICATION
FOR LINING DUCTILE IRON PIPE
FOR SEWER SERVICE

1.0 Condition of Ductile Iron Prior to Surface Preparation

All ductile pipe and fittings shall be delivered to the application facility without asphalt, cement lining, or any other lining on the interior surface. Because removal of old linings may not be possible, the intent of this specification is that the entire interior of the ductile iron pipe and fittings shall not have been lined with any substance prior to the application of the specified lining material and no coating shall have been applied to the first six inches of the exterior of the spigot ends.

2.0 Lining Material

The Standard of Quality is Protecto 401 Ceramic Epoxy. The material shall be an amine cured novalac epoxy containing at least 20% by volume of ceramic quartz pigment. Any request for substitution must be accompanied by a successful history of lining pipe and fittings for sewer service, a test report verifying the following properties, and a certification of the test results.

- A. A permeability rating of 0.00 when tested according to Method A of ASTM E-96-66, Procedure A with a test duration of 30 days.
- B. The following test must be run on coupons from factory lined ductile iron pipe:
 - 1. ASTM B-117 Salt Spray (scribed panel) - Results to equal 0.0 undercutting after two years.
 - 2. ASTM G-95 Cathodic Disbondment 1.5 volts @ 77°F. Results to equal no more than 0.5mm undercutting after 30 days.
 - 3. Immersion Testing rated using ASTM D-714-87.
 - a. 20% Sulfuric Acid - No effect after two years.
 - b. 140°F 25% Sodium Hydroxide - No effect after two years.
 - c. 160°F Distilled Water - No effect after two years.
 - d. 120°F Tap Water (scribed panel) - 0.0 undercutting after two years with no effect.
- C. An abrasion resistance of no more than 3 mils (.075mm) loss after one million cycles using European Standard EN 598: 1994 Section 7.8 Abrasion Resistance.

3.0 Application

A. Applicator

The lining shall be applied by a certified firm with a successful history of applying linings to the interior of ductile iron pipe and fittings.

B. Surface Preparation

Prior to abrasive blasting, the entire area to receive the protective compound shall be inspected for oil, grease, etc. Any areas with oil, grease, or any substance which can be removed by solvent, shall be solvent cleaned to remove those substances. After the surface has been made free of grease, oil or other substances, all areas to receive the protective compounds shall be abrasive blasted using sand or grit abrasive media. The entire surface to be lined shall be struck with the blast media so that all rust, loose oxides, etc., are removed from the surface. Only slight stains and tightly adhering oxide may be left on the surface. Any area where rust reappears before lining must be reblasted.

C. Lining

After the surface preparation and within 8 hours of surface preparation, the interior of the pipe shall receive 40 mils nominal dry film thickness of Protecto 401. No lining shall take place when the substrate or ambient temperature is below 40 degrees Fahrenheit. The surface also must be dry and dust free. If flange pipe or fittings are included in the project, the lining shall not be used on the face of the flange.

D. Coating of Bell Sockets and Spigot Ends

Due to the tolerances involved, the gasket area and spigot end up to 6 inches back from the end of the spigot end must be coated with 6 mils nominal, 10 mils maximum using Protecto Joint Compound. The Joint Compound shall be applied by brush to ensure coverage. Care should be taken that the Joint Compound is smooth without excess buildup in the gasket seat or on the spigot ends. Coating of the gasket seat and spigot ends shall be done after the application of the lining.

E. **Number of Coats**

The number of coats of lining material applied shall be as recommended by the lining manufacturer. However, in no case shall this material be applied above the dry thickness per coat recommended by the lining manufacturer in printed literature. The maximum or minimum time between coats shall be that time recommended by the lining material manufacturer. **To prevent delamination between coats, no material shall be used for lining which is not indefinitely recoatable with itself without roughening of the surface.**

F. **Touch-Up & Repair**

Protecto Joint Compound shall be used for touch-up or repair in accordance with manufacturer's recommendations.

4.0 Inspection and certification

A. **Inspection**

1. All ductile iron pipe and fitting linings shall be checked for thickness using a magnetic film thickness gauge. The thickness testing shall be done using the method outlined in SSPC-PA-2 Film Thickness Rating.
2. The interior lining of all pipe barrels and fittings shall be tested for pinholes with a nondestructive 2,500 volt test. Any pinholes found shall be repaired prior to shipment.
3. Each pipe joint and fitting shall be marked with the date of application of the lining system along with its numerical sequence of application on that date and records maintained by the applicator of his work.

B. **Certification**

The pipe or fitting manufacturer must supply a certificate attesting to the fact that the applicator met the requirements of this specification, and that the material used was as specified.

5.0 Handling

Protecto 401 lined pipe and fittings must be handled only from the outside of the pipe and fittings. No forks, chains, straps, hooks, etc. shall be placed inside the pipe and fittings for lifting, positioning, or laying. The pipe shall not be dropped or unloaded by rolling. Care should be taken not to let the pipe strike sharp objects while swinging or being off loaded. Ductile iron pipe should never be placed on grade by use of hydraulic pressure from an excavator bucket or by banging with heavy hammers.

MANHOLES

1.0 GENERAL:

This item shall consist of furnishing all materials, labor, supervision, tools, equipment and incidentals for the construction of standard manholes, in accordance with the Contract Drawings and Specifications. Included in the work are structural excavation, backfill, and disposal of excess material.

2.0 APPLICABLE DOCUMENTS:

The following publications form a part of this specification 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 48/A48M	Standard Specification for Gray Iron Casting
C 39/C39M	Standard Specification for Test for Compressive Strength of Cylindrical Concrete Specimens
C 443	Standard Specification for Joints for Circular Concrete Pipe and Manholes Using Rubber Gaskets
C 478	Standard Specification for Precast Reinforced Concrete Manhole Sections
C 497	Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile
C 2922	Density of Soil and Soil Aggregate in Place by the Nuclear Method (Shallow Depths)

American Association of State Highway and Transportation Officials (AASHTO):

M-198	Standard Specifications for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.
T-99	Standard Method of Test for the Moisture-Density Relations of Soils Using a (2.5kg) Rammer and (305 mm) Drop.
T-191	Standard Method of Test for Density of Soil In-Place by the Sand-Cone Method.

3.0 SUBMITTALS

The following tests or data shall be submitted to the Engineer from the Contractor for approval prior to incorporation into the work:

3.1 Certificates: The Contractor shall furnish certificates from supplier certifying the products conform to the required specifications included herein for the following items:

- 3.1.1. Flexible Plastic Gaskets
- 3.1.2. Precast Manhole Bases
- 3.1.3. Precast Manhole Riser Sections
- 3.1.4. Manhole Steps
- 3.1.5. Manhole Frames and Covers (ASTM A 48)
- 3.1.6. Epoxy Grout

3.2 Catalogue Cuts or Brochures: The Contractor shall also submit catalogue cuts or product brochures providing descriptive data, recommended application and use, and installation procedure for the following items:

- 3.2.1. Manhole Frames and Covers
- 3.2.2. Epoxy Grouts
- 3.2.3. Manhole Steps

4.0 MATERIALS

4.1 Manhole Riser Sections: Manhole riser sections shall be precast reinforced sections conforming to ASTM C 478 and as shown on the Contract Drawings.

4.2 Joints: Joints for precast riser sections shall be concrete pipe type flexible plastic gaskets. Joint material shall be pre-formed conforming the requirements of AASHTO M-198. Installation shall be in accordance with manufacturer's recommendations.

4.3 Concrete Manhole Bases: Concrete manhole bases shall be precast or cast-in-place as follows:

4.3.1 Cast-In-Place Manhole Bases and Box Type Bases (if used): Concrete and reinforcing steel shall conform to the requirements of Technical Specifications - CONCRETE.

4.3.2 Precast Concrete Bases: Precast concrete bases shall conform to the requirements of ASTM 478 with reinforcing steel (size and spacing as indicated on the plans).

4.4 Manhole Steps: Manhole steps shall be plastic coated corrosion resistant with a minimum

design load of 300 pounds and shall be installed as shown on the Contract Drawings.

4.5 Cement Grout: Cement grout shall be high strength, non-metallic conforming to Corps of Engineers CRD-C-588. The grout shall be V-3 by W. R. Meadows, Inc., Masterflow 713 by Master Builders or equal.

4.6 Manhole Frame and Covers: Manhole frame and covers shall conform to ASTM A 48 as well as to the following requirements. All frame and covers shall be new when installed for the project and shall meet AASHTO H-20 loading condition.

4.6.1 Standard Manhole Cover and Frame - shall be as manufactured by Dews Foundry, Jackson Standard, Model DF-25 (7) or Vulcan Foundry, Model V-1115, 420 Pounds, marked "CITY OF HATTIESBURG SEWER", domestic origin, or equal.

4.6.2 Water Tight Manhole Cover and Frame - shall be as manufactured by Vulcan Foundry, Model V2357, or Dews Foundry, Model DF-25(7)W.T., 410 pounds with neoprene gasket, four 5/8 inch stainless steel bolts recessed into cover. Cover labeled "CITY OF HATTIESBURG SEWER", domestic origin, or approved equal.

4.7 Epoxy Grout: Epoxy Grout shall be high strength non-metallic, non-shrinking. The grout shall be as by EMBECO, Inc., SEAL-COAT or approved equal.

4.8 Drop Manholes: Concrete for drop manholes shall conform to the requirements of Technical Specifications - CONCRETE. Pipe and fittings shall be the same material and size as the incoming gravity sewer.

4.9 Flexible Connection: At all sewer connections to manholes, provide gasket flexible watertight connection that allows for differential settlement of the pipe and manhole wall. Bands, clamps and other metal accessories shall be of Series 304 stainless steel.

4.10 All manholes: All manholes shall be lined inside with a twenty (20) mil dry film thickness of an acceptable coal tar epoxy system.

5.0 CONSTRUCTION

5.1 Earthwork

5.1.1 General: Excavation shall be to the extent required to allow proper construction of the manhole. Shoring and sheeting shall be utilized where required by Federal, State and local codes and regulations for safe working conditions. In addition, shoring and sheeting shall be required to protect the integrity of adjacent structures or prevent adverse effects on surrounding areas. Dewatering shall be employed to the extent required to allow dry working conditions.

5.1.2 General Excavation: The Contractor shall "lay back" or employ shoring and sheeting as required to assure stability of the excavation. Material shall be stockpiled so as not to surcharge adjoining pipe trenches. Topsoil shall be separated so as to allow the maximum reuse in grassing operations.

5.1.3 Structural Excavation: The area immediately beneath the manhole bases shall be graded and compacted. Compaction shall be to 96% of maximum laboratory density as determined by AASHTO T 99. Should unsuitable material be encountered, the Engineer may direct that the area be over excavated and filled with stabilization material. Specification for stabilization material and payment for such shall be in accordance with Technical Specifications.

5.1.4 Backfilling: Backfill material shall consist of select backfill in accordance with Technical Specifications. Backfilling shall be uniformly placed around the structure in 10-inch layers and be compacted to 90% of maximum density to full depth in unimproved areas. Backfill in paved areas and within five feet to any edge of pavement shall be compacted to 95% of maximum laboratory density in 6-inch layers to the subgrade line. Refer to Technical Specifications.

5.1.5 Salvage: Manhole frames and covers removed during excavation shall remain the property of the Owner and shall be delivered to a location designated by the Owner. All other items removed shall be disposed of by the CONTRACTOR at his expense.

5.2 Riser Installation: Precast concrete riser sections shall be installed plumb and in accordance with the details shown on the Contract Drawings. Joints shall be installed in accordance with manufacturer's recommendations.

The manhole invert channels shall be formed in the bases, smooth and semi-circular in shape conforming to the inside of the adjacent sewer section. Changes in the direction of flow shall be made with a smooth curve of as large a radius as the size of the manhole will permit. Changes in size and grade of the channels shall be formed directly in the concrete of the manhole base. The joint between the base and riser section shall be sealed with epoxy grout. Clean pea gravel shall be used as the epoxy grout filler.

Standard manhole cut-outs and lifting holes shall be sealed with epoxy grout.

5.3 Cast-In-Place Concrete: Bases, flat tops, and drop manhole risers shall be constructed in accordance with Technical specifications - CONCRETE.

5.4 Manhole Steps: Manhole steps shall be installed during the manufacturing of the riser or cone sections. Risers and cones shall be joined so the steps are vertically aligned.

5.5 Manhole Frame and Covers: Manhole frame and covers shall be set and grouted in place

with cement grout. For manholes located in roads or streets, the manhole cover shall be flush with pavement or surface course.

6.0 TESTING

6.1 General: The Contractor shall conduct (and bear the cost of) all testing (Laboratory Approved by the Owner) as directed by the Engineer and furnish results of such tests prior to incorporating the material into the work. All testing is subsidiary to Manhole Payment Items.

6.1.1 Cast-In-Place Concrete Items: The concrete quality testing for manhole bases, drop manholes, and valve boxes shall be tested in accordance with Technical specifications - CONCRETE.

6.1.2 Manhole Risers and Precast Concrete Bases: Manhole risers and precast concrete bases shall be tested for concrete compressive strength. If the place of manufacture is local and reasonably available to the Engineer, Paragraph (a) shall be followed for testing requirements. Should the place of manufacture not be available, Paragraph (b) shall apply.

The contractor shall prepare (in the presence of the Engineer) standard rodded concrete cylinder or cylinders compacted and cured in a similar manner to the manhole sections. Concrete for such cylinders shall be typical fresh concrete mix drawn from the actual casting operation of a riser or base. Cylinders shall be tested in accordance with ASTM C 39. The average compressive strength shall be equal to or greater than the specified design strength (4000 psi). Not more than 10% of the cylinders shall fall below the design strength (4000 psi). In no case shall any cylinder tested fall below 3200 psi. Number of such cylinder tests shall be as follows:

6.1.2.1 One set of cylinders for each day's run castings or

6.1.2.2 One set of cylinders for each 200 linear feet of riser sections manufactured.

6.1.2.3 One set of cylinders per 20 bases or flat tops manufactured.

The Engineer may require additional tests should compressive test results fail.

6.1.3 Earthwork Test: Maximum laboratory density shall be measured in accordance with AASHTO T-99. Field densities shall be determined in accordance with AASHTO T-191 or ASTM D 2992. Standard proctors and field densities shall be performed in accordance with the following schedule.

Standard proctor tests shall be required for earthwork associated with manhole construction. At least two (2) field density tests shall be conducted for earth work associated with each manhole construction.

6.1.4 Inspection for Watertightness: All manholes shall be inspected for watertightness prior to placing into service.

RESTORATION OF ROADS, DRIVEWAYS, FENCES

LAWNS AND OTHER GRASSED AREAS

1.0 GENERAL

The work under this item of work shall consist of furnishing all necessary materials, labor, supervision, tools, equipment and incidentals for the restoration of roads, driveways, fences, lawns and other grassed areas so as to provide satisfactory repair to all damage caused by general construction work. It is the intent of this Specifications to restore all such features to the general conditions that existed prior to construction activity insofar as practical. It is not the intention of this Specification that trees, which must be cut and removed, be restored. The Contractor is expected to be familiar with the overall area and be satisfied as to the materials required and level of effort needed to accomplish such restoration in accordance with this Specification.

2.0 APPLICABLE PUBLICATIONS

The following publications form a part of this specification 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 Association of State Highway and Transportation Officials (AASHTO).

- T 99 Standard Method of Test for the Moisture Density Relations of Soils Using a 5.5 lg. (2.5 kg) Rammer and a 12-inch (305 mm) Drop.
- T 167 Compressive Strength of Bituminous Mixture
- T 191 Standard Method of Test for Density of Soil In-Place by the Sand-Cone Method
- T 230 Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures

American Society for Testing and Materials (ASTM)

- D 2922 Density of Soil and Soil Aggregate in Place by the Nuclear Method (Shallow Depths)

Mississippi Department of Transportation (MDOT)

Standard Specifications for Road and Bridge Construction, Current Edition.

Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)

3.0 SUBMITTALS

3.1 Mix Designs: Design mix will be provided by Contractor and approved by Engineer prior to production of asphalt.

4.0 MATERIALS

4.1 Subbase and Base Courses: Subbase and base courses under paved areas shall be as specified in MDOT Specification Section 301.

4.2 Prime Coat: Prime coat shall consist of Grade MC-30 or Grade MS-70 in accordance with the applicable requirements of MDOT Specification Section 702.

4.3 Bituminous Pavement: Bituminous Pavement for roadway and parking areas, wearing and binder courses, shall consist of a mix in accordance with MDOT Specifications Section 403. Materials shall conform to the following subsection of MDOT Specifications Sections 702 and 703.

A. **Hot Mix Asphalt All Sizes:** Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition

B. **Topsoil:** Topsoil shall be in accordance with Technical Specifications – SEEDING AND SODDING.

C. **Seeding and Sodding:** Seeding and sodding operations shall be in accordance with Technical Specifications - SEEDING AND SODDING.

5.0 CONSTRUCTION

5.1 Maintenance of Traffic: Prior to limiting or restricting traffic on any street or road, the Contractor shall obtain permission from the Engineer. Through or local traffic shall at all times be accommodated by the use of temporary approaches, crossings or detours (if allowed by the Engineer). Satisfactory (to the Property Owner) ingress and egress to any public or private property shall be properly maintained. Proper barricades, signs and detour signs shall be provided by the Contractor to adequately warn motorists of obstructions ahead. Lighted (flashing) barricades shall be used at night.

Flagmen shall be provided to direct traffic around equipment and for one way movement of

traffic around equipment and for one way movement of vehicles. The Contractor may have to stop construction and restore full traffic during certain rush hours.

The Contractor shall at all times (unless otherwise permitted in writing by the Engineer) maintain open one lane to traffic during construction operations and restore roadways to two-way traffic during non-construction hours. All traffic shall be maintained in accordance with the MUTCD, current Edition.

5.2 Repair of Asphalt/Concrete Streets/Driveways/Parking Lots:

A. Removal and Earthwork: The existing asphalt pavement shall be uniformly saw cut on straight lines and the material shall be removed. Other methods of cutting the existing asphalt surface which will result in a uniform straightedge similar to a sawed cut may be acceptable. Upon completion of the pipe laying, select backfill shall be placed in the excavation in maximum 8-inch lifts and compacted to at least 90% of maximum laboratory density to within one foot of the top subgrade and to 95% of maximum laboratory density in the upper one foot of the subgrade.

Maximum density of typical select backfill material shall be determined in accordance with AASHTO T 191 or ASTM D 2922. Portable mechanical tampers or vibratory compactors shall be used in the trenches. Rollers may be used at street level. Existing base and asphalt surfaces which become undermined during construction shall be removed until firm undisturbed subgrade is reached.

A. Select Fill: Class 9, Group "C" Modified for a PI of between 5 and 15 as per latest Edition of Mississippi standard specifications for Road and Bridge construction

B. Asphalt Repair: Temporary Asphalt repair shall be made using 3" thickness of 825 crushed stone.

C. Concrete Repair: Concrete repair shall be made using 3,000 psi concrete meeting Technical Specifications - CONCRETE

D. Prime Coat: Prime coat shall be applied to exposed existing base material prior to overlay with asphaltic base course in accordance with MDOT Specification Section 408.

F. Tack Coat: Tack coat shall be applied to existing or new asphaltic wearing course and asphaltic base, or concrete which is to require asphalt wearing course.

G. Asphalt Wearing Course: Placement and compaction of the bituminous pavement shall be in accordance with MDOT Specification Section 403.03.

E. Utilities: All utility covers excavated during removal of streets, driveways, parking lots shall be restored to finished grade.

5.3 Driveways and Sidewalks: Driveways and sidewalks shall be repaired in similar manner to the original construction. Asphalt drives shall be saw cut where required and repaired in accordance with Paragraph (b) of this Specification. Concrete drives shall be saw cut or removed to the next joint. The minimum thickness for concrete driveway repair is 7 inches and for sidewalks is 4 inches.

Concrete surfaces shall be properly tooled and receive a broom finish. Installation (if required) of new driveway drainage culvert shall be made only at the direction of the Engineer. The Contractor shall take all reasonable precautions to allow for reuse of existing drainage culverts.

5.4 Repair to Gravel Roads: Gravel roads shall be backfilled and compacted in accordance with Paragraph (B) of this Specification. The final surface shall consist of 12-inch in-place compacted clay gravel. Compaction shall be to 100% of maximum laboratory density in accordance with AASHTO T99.

5.5 Repair to Lawns:

A. General: The Contractor shall exercise extreme care to minimize damage to improved lawns. Trees and shrubs within the limits of work shall be removed only for essential construction requirements. Any shrubs, which are removed or damaged, shall be replaced by satisfactory (to the Property Owner) planting by the contractor. Any grass seed areas, roads, streets, driveways, culverts, fences, water lines, metal boxes or other items (excluding trees unavoidably cut) which are damaged by the Contractor, shall be satisfactorily restored by Contractor. Acceptance of improved lawn repairs shall be based on the firm establishment of live stand of grasses and live growth of any replanted and acceptable shrubs. The Contractor shall water and fertilize such areas until healthy growth of grass (and shrubs, if applicable) are attained.

B. Grading: The surface areas shall receive finish grading so the finish topsoil surface (after settlement) will meet the existing contour grade of the area prior to construction. The natural drainage during and after construction shall not be altered so as to cause adverse effects to adjoining properties.

C. Topsoil: The Contractor shall strip topsoil and sod and stockpile for later use. Upon completion of trenching over the area. Additional topsoil shall be furnished if required (at no additional cost) to provide a uniform thickness of 3 inches. Lime at a rate of 1 - ½ tons per acre and fertilizer (13-13-13) at a rate of 800 pounds per acre shall be applied as needed to further establish grass growth.

D. Grassing: Grass seed, sprigs, or sod similar to the existing lawn grasses shall be planted in accordance with the supplier's recommendations. Winter cover grasses such as rye grass shall be applied (in addition to planting the permanent grasses) if seeding, sprigging, or sodding is done at a time of year when the permanent grasses will not actively grow. The type (s) of permanent grasses shall be the same as the grass (es) in the damaged lawns. If the lawn repairs are accomplished between September 1 and March 1, the Contractor shall continue the restoration

work during the next period of March 15 and April 5 and mow the grass and continue the restoration until satisfactory growth of the permanent grass (es) is obtained. Such additional restoration work shall include the 1 - ½ tons of lime per acre, application of 13-13-13 fertilizer at a rate of 800 pounds per acre and replanting and watering permanent grass as necessary to obtain satisfactory (to Engineer) growth. No time will be charged against the Contract Time for any such additional restoration work.

Sodding: Sodding shall be in accordance with Technical Specifications: - Seeding and Sodding

5.6 Erosion Control: During all phases of construction, the Contractor shall adequately protect all work from adverse erosion. Soil shall not be allowed to flow off the limits of work area. The Contractor shall employ the use of ditch checks, matting, temporary grass cover, blankets, or other measures to control erosion. The Contractor shall be responsible to correct damage caused by erosion. During the construction of this project, all work areas will be strictly monitored. All trench lines will be kept in excellent condition, all streets and drives will receive careful maintenance, keeping potholes and settled areas filled in. Dust control is essential and will also be strictly monitored.

5.7 General Grassing of Unimproved Areas

A. General: The Contractor shall seed and establish grass growth in all disturbed areas in unimproved areas (to include pastures and roadsides). Acceptance of the grass cover shall be based upon the firm establishment of a live stand of grass. The contractor shall water such grass if natural rainfall fails to adequately provide moisture. On slopes and other areas subject to erosion, grassing shall be accomplished as soon as practical (within 48 hours unless weather is prohibiting) after finish grading operations.

B. Grading: The surface area shall receive finish grading so the finish topsoil surface (after settlement) will meet the existing contour grade of the area prior to construction. The natural drainage during and after construction shall not be altered so as to cause adverse effects to adjoining properties.

C. Topsoil: The Contractor shall remove existing topsoil and stockpile for later use. Upon completion of backfilling (to establish contours as before construction), the topsoil shall be uniformly spread back over the area. The Engineer may require additional topsoil be furnished by the Contractor at no expense to the project, if in the opinion of the Engineer, adequate provisions and efforts were not made by the Contractor to stockpile and re-use existing topsoil material.

D. Fertilizer and Agricultural Limestone: The Contractor shall uniformly apply 800 lbs. per acre of 13-13-13 fertilizer and also apply two (2) tons per acre of agricultural limestone to the area to be seeded. The fertilizer and limestone shall be tilled into the soil to a depth of four (4) inches.

E. Mulch Cover: Erosion prone areas such as steep slopes and highway shoulders shall receive a layer of loose straw mulch or equivalent at the rate of one and one-half (1-1/2) tons per acre. The mulch cover shall be established by the application of an emulsified asphalt or by "crimping" parts of the material into the soil.

5.8 Miscellaneous Items: Items such as fences, gates, paved ditches, and other items shall be replaced or repaired as required for restoration. Should additional fencing material be required, new post and new wire of similar size, type and gauge shall be provided and installed.

5.9 General Care: Reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees, which do not have to be removed in the opinion of the Engineer, and which receive damage to branches shall be trimmed of those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.

6.0 TESTING

6.1 General: All sampling and testing shall be accomplished by the testing laboratory approved by the Owner and employed by the Contractor to perform such services. Results shall be immediately forwarded to the Engineer by the Contractor.

6.2 Earthwork: Earthwork directly involved with road and street repair shall be tested as follows:

A. Moisture Density Relationship (Standard Proctors): Two tests of sampled native material shall be required. Tests shall be in accordance with AASHTO T 99.

B. Field Density: A minimum of two and a maximum of four field density tests shall be required. Density tests shall be in accordance with AASHTO T 191 or ASTM D 2922.

C. Topsoil: Two pH tests and two organic content tests (wet combustion method) will be required.

CONCRETE

1.0 GENERAL

- A. This item shall consist of furnishing all materials, labor, supervision, tools, equipment and incidentals and performing all forms of work; furnishing and placing reinforcement, inserts and anchors; mixing, placing, curbing, and furnishing of portland cement concrete.
- B. The work includes, but is not necessarily limited to manholes, pumping stations, lift stations, driveways, and minor concrete work.

2.0 APPLICABLE DOCUMENTS

The following publications form a part of this Specification and where referred to by basic designation only, are applicable to the extent indicated. The latest editions of the publication referenced shall apply to the work.

A. American Society for Testing and Materials (ASTM):

- A 615 Billet Steel for Concrete Reinforcement
- C 31 Making and Curing Concrete Compressive and Flexural Strength Test Specimens in the Field
- C 33 Concrete Aggregates
- C-39 Compressive Strength of Molded Concrete Cylinders
- C 143 Slump of Portland Cement Concrete
- C 150 Portland Cement

B. Mississippi Department of Transportation (MDOT):

Standard Specifications for Road and Bridge Construction, Latest Edition.

3.0 SUBMITTALS:

The following data shall be submitted to the Engineer for review prior to incorporation into the work:

- A. Letter from the manufacturer certifying the concrete mix conforms to the requirements for Class B concrete as defined in Section 804 of the MDOT Standard Specifications for Road and Bridge Construction.

B. Letter of certificate from the manufacturer certifying that the reinforcing steel conforms to the herein specified requirements.

4.0 MATERIALS:

A. General: The concrete shall be ready-mix concrete manufactured by a plant for delivery to the site of the work in a plastic state. The Contractor may batch the concrete at the work site by use of portable mixers providing the following requirements are met:

1. Facilities shall be provided to properly weight, proportion and control the components of the concrete mix.

2. The mixer(s) shall be of such capacity so as to allow the complete placement of the plastic concrete mix prior to the initial set of any portion of the particular concrete pour.

B. Concrete Mix: The concrete materials and mix design, shall conform to the requirements for Class B concrete Section 804, MDOT Standard Specifications for Road and Bridge Construction. The compressive strength of the concrete shall be a minimum of 3000 psi at 28 days, or earlier. Type I Portland Cement shall be used in the mix, except where otherwise specified or permitted. Prior to producing any concrete for cast-in-place construction on the project, the Contractor shall submit to the Engineer the proposed mix design and shall obtain Engineer's approval of the mix design.

C. Reinforcing Steel - shall be new stock, deformed bars conforming to ASTM A 615, Grade 40 or Grade 60.

D. Curing Material - shall consist of wetted burlap, wetted cotton mats, plastic sheeting, or an approved liquid membrane material which will satisfactorily keep the new concrete in a moist condition for at least seven (7) days.

5.0 CONSTRUCTION:

A. Weather Limitations: Concrete shall be placed when the atmospheric temperature is a Minimum of thirty-five (35) degrees F. and rising. Newly placed concrete shall be protected from cold temperatures for at least four (4) days at a temperature of not less than forty (40) degrees F.

B. Forms: Forms shall be securely anchored in place and properly aligned. Wood forms shall be oiled prior to placement of fresh concrete mix.

C. Reinforcement: Reinforcing bars shall be securely mounted by the use of chairs or other approved methods so as to not become displaced during placement of concrete mix. The positioning of reinforcing by working the bars into the newly placed concrete mix shall not be allowed.

D. Placement: The plastic concrete mix shall be worked (and vibrated if required) into the formwork. The mix shall be consolidated so as to remove all voids and finished to form a true and level surface.

E. Curing: The hardened concrete shall be kept moist by the use of curing materials for a minimum of seven (7) days.

F. Slump Requirements: The following slump requirement shall apply:
Class B Concrete 2-4 Inches

G. Chamfered Corners: All exposed corners shall be chamfered one (1) inch or as indicated.

H. Finish:

1. All surfaces shall be "floated" to provide a uniform and level surface. Defects (honeycombs, ties, etc.) shall be repaired. No rubbing shall be required.

2. Sidewalks, driveways and other surfaces subject to pedestrian traffic shall be floated as noted in paragraph 1 above and shall receive a "broom" finish.

6.0 TESTING

The following test shall be required:

A. Slump: The Contractor shall test the concrete mix for conformance to the slump requirements as required. Test shall be in accordance with ASTM C 143.

B. Compressive Strength: The Contractor shall sample the concrete mix and prepare test cylinders for conformance to the compressive strength requirements. The Contractor shall transport the cylinders to the testing laboratory (employed by the Contractor) and have the cylinders tested in accordance with ASTM C 31 and C 39. The results of such test shall be forwarded to the Engineer. Test shall be performed at the following schedule.

One test per 15 cubic yards or major fraction thereof. A minimum of one test for each day of mixing shall be performed.

SEEDING AND SODDING

1.0 DESCRIPTION

This item consists of furnishing all labor, supervision, materials, tools, incidentals and equipment and performing all work for topsoiling, tilling, fertilizing, seeding, watering, and otherwise establishing, protecting and maintaining seeded and sodded areas as required by the Contract Drawings and these specifications, and including repair, refertilizing and reseeding as required until final inspection and acceptance of the project.

2.0 SUBMITTALS

Certificates for fertilizer, limestone, seed.

3.0 MATERIAL

3.1 **Topsoil:** Topsoil shall be the surface layer of soil that is stockpiled by the Contractor during stripping and/or excavation on the site. The topsoil shall be free of subsoil, clay, lumps, stones, brush or seed. Topsoil shall have a pH value of not less than 4.5 nor more than 8.0.

3.2 **Lime:** Lime shall be ground limestone containing not less than 80% of total carbonates and shall be ground to such fineness that 80% will pass through a No. 10 mesh sieve and 40% will pass through a No. 40 mesh sieve.

3.3 **Fertilizer:** Fertilizer shall be water soluble commercial carriers of available plant food elements or combinations thereof, as stated herein and shall conform to the applicable state fertilizer laws. They shall be uniform in composition, dry, and free flowing materials in condition for application by suitable equipment. The fertilizer shall be delivered in standard bags or other convenient standard containers, each fully labeled with manufacturer's guaranteed analysis. Any fertilizer shall contain not less than the percentages by weight of the ingredients set out as follows: (1) Nitrogen, 13% (2) Phosphorous P O, 13%, (3) Potash K C, 13%. Invoices for fertilizer will show the kind and have analysis furnished.

3.4 **Seed:** Seeds with a minimum pure live seed content of 90% shall be used. They shall be of the best grade and of known vitality, purity, and germination and shall be delivered in containers bearing seed tags as required by law showing percentages of germination content and purity of seed as well as percentages of weed seed content.

All seeds shall be free of wild onion, Canadian thistle, Johnson grass, crab grass or other seeds of noxious weeds. All seeds shall be furnished in standard containers, or as acceptable to the Engineer. Seed which has become wet, moldy or otherwise damaged in transit or storage will not be acceptable.

Purity, Germination and Planting Schedule

Spring and Summer Seeding (March 1 to September 1)

<u>Name</u>	<u>Percent Purity</u>	<u>Percent Germination</u>	<u>Mix (Dry Wt. Lbs.) Per Acre</u>
Hulled Bermuda	95	90	20
Pensacola Bahia	95	90	30

TOTAL 50

Fall and Winter Seeding (September 1 to March 1)

<u>Name</u>	<u>Percent Purity</u>	<u>Percent Germination</u>	<u>Mix (Dry Wt. Lbs.) Per Acre</u>
Unhulled Bermuda	95	90	20
Pensacola Bahia	95	90	30
Rye	95	85	15
Crimson Clover	95	85	8

TOTAL 73

Seeding in Existing Lawns: Grass seeds for existing lawns shall be the same as the existing grass.

3.5 Leguminous Inoculants: Inoculation media containing live nitrogen-fixing bacteria shall be supplied with all legume seed. The inoculants shall be standard, pure culture of nitrogen-fixing bacteria. Each kind of legume will require a cultural bacteria that is adapted to that particular kind of seed. The bacteria shall be supplied in convenient containers of a proper size to treat the amount of seed to be planted. The legume seeds shall be treated according to the directions, and before the expiration date for use of the media shown on the container.

3.6 Soil for Repairs: For fills or areas to be repaired, soil shall be topsoil of a least equal quality to that which exists in areas adjacent to the area to be repaired.

3.7 Water: Water shall be free from oil, acid, alkali, salt, and other substances harmful to growth of grass, and shall be from a source accepted prior to use.

3.8 Solid Sod: Bermuda or Carpet Grass and shall be native to the locality of the work and shall, when placed be live, fresh, growing grass with at least two and one-half (2 ½) inches of soil adhering firmly to the roots. The sod shall be reasonably free from obnoxious weeds or other

grasses, and shall not contain any matter deleterious to its growth; or which might affect its subsistence or hardness when transplanted. The sod shall be in blocks at least 3" x 8", and free from ragged edges.

4.0 INSPECTION AND TESTS

4.1 Fertilizer and Limestones: Duplicate copies of material invoices shall be furnished to the Engineer. Invoices shall show quantities and grade of fertilizer, quantity of limestone, percentages of calcium carbonate and magnesium carbonate, as applicable, and the percentages of limestone that pass the No. 40 and the No. 10 mesh sieves. Samples of each lot of fertilizer and limestone shall be furnished for testing. Upon completion of project a final check of total quantities of fertilizer and limestone used will be made against total area treated, and if minimum rates of application have not been met, additional quantities of these materials to make up minimum application specified shall be distributed.

4.2 Seed: Contractor shall furnish to the Engineer duplicate signed copies of statement(s) from vendor(s), certifying that each container of seed delivered is labeled in accordance with Federal Seed Act and is at least equal to requirements specified therein. This certification shall be obtained from vendor and shall be furnished before application.

5.0. PREPARATION OF GROUND SURFACE

5.1 General: Equipment, in good operating condition, shall be used for the proper preparation of the ground and for handling and placing all materials. Equipment shall be acceptable before work is started.

5.2 Topsoiling: Topsoil shall be obtained from job site stockpiles formed during stripping and/or excavation operations and shall be free from subsoil, clay lumps, stones, brush, grasses or weeds, excess acids or alkali, or any other material to subsequent, smooth, grading, planting, and maintenance operations.

The topsoil shall be evenly spread on tilled areas to a uniform depth of at least 3 inches after compaction. Spreading shall be performed so that seeding can proceed with a minimum of soil preparation or tilling. After preplanting fertilization is completed, the topsoil shall be compacted by rolling with a cultipacker or by other approved means.

Rehabilitation of the stockpile areas shall include returning the area to near pre-construction conditions, including seeding of the area to re-establish the growth of grass.

5.3 Grading: Previously established grades shall be maintained on the areas to be treated in a true and even condition; necessary repairs shall be made to previously graded areas by means of graders or other approved equipment.

5.4 Tillage: After the areas required to be treated have been brought to the grades shown, the

soil shall be tilled to a depth of at least 4 inches by plowing, disking, harrowing, or other acceptable operations until the condition of the soil is acceptable. The work shall be performed only during period when beneficial results are likely to be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed. Undulations or irregularities in the surface shall be leveled before the next specified operation.

6.0 APPLICATION OF FERTILIZER AND LIMESTONE

6.1 Preplanting fertilization of areas to be seeded: Fertilizer shall be distributed uniformly at a rate of 800 pounds per acre over areas to be seeded and shall be mixed into the soil to a depth of at least 4 inches by disking, harrowing, or other acceptable methods. Application of fertilizer may be part of the operation specified in Section 5.4: TILLAGE of this specifications.

6.2 Liming: Immediately following or simultaneously with incorporation of fertilizer, limestone shall be distributed uniformly at a rate of 4000 pounds per acre, and shall be mixed into the soil to a depth of at least 4 inches by disking, harrowing, or other acceptable methods. Application of limestone along with fertilizer may be part of the operation specified in Section 5.4: TILLAGE of this specifications.

6.3 Leveling: Surface irregularities resulting from tillage, fertilizing, liming, or other operations shall be leveled before seeding.

6.4 Postplanting fertilization: From 40 to 60 days after seeding, ammonium nitrate or its nitrogen equivalent shall be applied uniformly at a rate of 225 pounds per acre over areas seeded. Fertilizer shall be applied when grass blades are dry to minimize burning. The planted area shall be watered to thoroughly moisten the upper 6 inches of the soil surface after the fertilizer is applied.

7.0 PLANTING SEED

7.1 General : A satisfactory method of sowing shall be employed, using approved mechanical power-drawn drills or seeders, or other approved methods. When drills are used, markers or other means shall be provided to insure that the successive seeded strips will overlap or be separated by a space no greater than 6 inches. When delays in operations extend the work beyond the most favorable planting season for species designated or when conditions are such by reason of drought, high winds, excessive moisture, or other factors that satisfactory results are not likely to be obtained, work shall be halted as directed and resumed only when conditions are favorable or when approved alternate or corrective measure and procedures have been effected. If inspection during or after seeding operations indicates that strips wider than 6 inches have been left unplanted or other areas skipped, additional seed shall be sown.

7.2 Broadcast Seeding: Seeding shall be broadcast either by hand or with acceptable seeding equipment, in combination with fertilizer, or with other acceptable sowing equipment. Seed shall be distributed uniformly over designated areas. Half of the seed shall be sown with sower moving

at right angles to first sowing. Seed shall be covered to an average depth of 1/4 inches by brush harrow, spiketooth harrow, chain harrow, cultipacker, hand rake with wood tines, or other approved device. Seed shall not be broadcast during windy weather.

7.3 Drill Seeding: Drill seeding shall be accomplished with approved equipment with drills set not more than 6 inches apart. Seed shall be sown uniformly over designated areas to average depth of 1/4 inch.

7.4 Sodding: All solid sod shall be procured areas where the soil is fertile and contains a high percentage of loamy topsoil, and from areas that have been grazed or mowed sufficiently to form a dense turf.

Mechanical devices, such as sod cutter, may be used for cutting the sod into strips or blocks. Care shall be exercised at all times to retain the native soil on the roots of the sod during the process of excavating, hauling and planting.

The solid sod blocks shall be transplanted within 24 hours from the time of cutting, unless they are stacked, to their destination in a manner satisfactory to the Engineer. All solid sod in stacks shall be kept moist and protected from exposure to the air and sun, and from freezing. In no event shall more than two (2) days elapse between the cutting and planting of the solid sod.

Solid sod shall be planted during the period between March 1st and December 15th, unless written permission is given by the Engineer to extend the planting season. The solid sod shall be placed on the prepared surface with the edges in close contact. All cracks between blocks of solid sod shall be closed with small pieces of fresh sod, and all cracks too small for sod shall be filled by a light dressing of topsoil. The entire sodded area shall then be compacted and watered to the satisfaction of the Engineer. Rollers, hand tamps or other approved equipment may be used for compacting.

Surfaces of solid sodding which, in the opinion of the Engineer, may slide due to the height and slope of the surface or nature of the soil, shall, upon direction of the Engineer, be "pegged" with wooden pegs driven through the sod blocks into firm earth, sufficiently close to hold the sod in place.

8.0 MAINTENANCE

Seeded areas shall be maintained until all work or designated portions thereof have been completed and accepted. Tall grass and weeds that tend to impede the desired grass species shall be mowed, and any damage resulting from these operations shall be repaired at the Contractor's expense.

9.0 ESTABLISHMENT OF GROWTH

9.1 **General** : The Contractor shall be responsible for proper care of seeded areas while grass is becoming established for three (3) months after completion of treatment on the entire project, unless desired cover is established in a shorter period of time and the Owner shortens responsibility period. The Contractor shall be responsible for providing a satisfactory stand of grass. A satisfactory stand of grass is determined as a cover of living grass in which gaps larger than 12 inches square do not occur as determined by an acceptance inspection made at the end of the maintenance period. Maintenance work shall be performed at the Contractor's expense.

9.2 **Mowing**: Seeded and sodded areas shall be mowed with acceptable mowing equipment to a height of about 4 inches when average height of grass becomes about 8 inches. When amount of cut grass is heavy, grass shall be removed to prevent destruction of underlying turf. If weeds or other undesirable vegetation threatens to impede the growth of planted species, such vegetation shall be mowed, or in case of excessive growth, shall be uprooted, raked and removed from area.

9.3 **Refertilizing**: The Contractor will determine areas needing refertilization at least 15 days before application is required. Fertilization shall be distributed on designated area during periods when grass is dry. 13-13-13 grade fertilizer shall be applied uniformly at a rate of 800 pounds per acre. Fertilizer conforming to physical condition, packaging and marking as specified herein before shall be provided.

9.4 **Reseeding**: The Contractor will determine areas requiring reseeding at least 15 days before period specified for reseeding. Seed specified hereinbefore shall be drilled at rates hereinbefore specified, in a manner that will cause minimum disturbance to existing stand of grass, and at an angle of not less than 15 degrees from direction of previously seeded rows.

SECTION 631 - SEWAGE PUMPING STATION

631.01 -Description. The work covered by this section consists of furnishing all labor, equipment and materials and performing all operations in connection with the installation, rehabilitation and/or demolition of solids handling, submersible pumps, pump station, wetwell, valve vault, piping and valves per details as indicated on the plans and as specified herein. The work includes clearing, grubbing, dewatering, bedding, pipe laying, backfilling, testing, fittings, and appurtenances required for a complete installation.

631.01.1 - Manufacturer's Experience. It is the intention of this Specification to cover minimum acceptable quality equipment for a complete installation. The Equipment Manufacturer shall have not less than 5 successful years experience in the design, construction and operation of equipment of the type specified at a minimum of 5 different collection system entities.

The Engineer may require evidence, in the form of operating records, from these collection system entities to substantiate any claims concerning the ability of the proposed sewage pumping equipment to perform as required.

631.01.2 - Supplier's/Manufacturer's Services. A Supplier's and / or Manufacturer's representative for the equipment specified herein shall be made available at the job site in the event of failure or other malfunction of the equipment or basin to verify the problem and take whatever action is necessary for correction thereof. The cost of this service shall be included in the pump supplier's cost.

Upon completion of pump station installation, a Supplier's and/or Manufacturer's representative for the equipment specified herein shall be made available at the job site for start-up, check-out, and testing of all pumps, controls, and other associated pump station equipment to the satisfaction of the Construction Manager, Owner, and the Engineer. The cost of this service shall be included in the pump supplier's cost.

SECTION 631.02 SUBMERSIBLE PUMP SPECIFICATION

1.1 GENERAL

- A. The contractor shall furnish and install Submersible Pumping units, complete with motor, equipped with cool agivent apparatus or approved equal. The pump shall be capable of continuously pumping with the liquid level at the top of the volute without overloading.

1.2 PUMP DETAIL

- A. Pumps shall be related for operating conditions as follows

Qty	(3)
Model	Wilo 6x6
GPM	750
TDH	54'
HP	32
RPM	1750
POWER	230/460 Volt, 3 Phase

1.3 PUMP CASINGS

- A. The pumping casings shall be constructed of engineered cast iron and shall be completely clear from suction to discharge without coming into contact with the impeller. All internal case clearances shall be equal to discharge diameter so that large diameter solids and long length or stringy solids will pass through the pump with the greatest handling efficiency. The impeller shall be of 100% recessed design, with wear plate and shall be mounted in such a manner as to allow solids which enter the suction opening to leave the pump with minimal impeller contact. The solids or fluids being pumped shall not to enter impeller in order to discharge.

1.4 IMPELLER

- A. Impeller and wear plate shall conform to ASTM A-532 Type 2 material and shall be 25% chrome iron (no exception) with a minimum of 55-Rockwell Hardness. The impeller shall have 7-vanes, and encompass a lip on back shroud to increase the efficiency of the pump and allow impeller to have a "flywheel" effect. Impellers shall be key driven and securely held to the shaft by a streamlined impeller washer and bolt assembly specifically designed to reduce friction in the suction eye of the impeller. The arrangement shall be such that the impeller cannot unscrew or be loosened by torque from either forward or reverse rotation. Designs based on

threaded connection between pump shaft and impeller will not be considered. Before installation the impeller and wear plate shall be broken down and inspected by the engineer for compliance with the specifications.

1.5 MOTOR

- A. Motor case and end brackets shall be cast iron. The motor shaft shall be one piece Wilo 420 stainless steel through both bearings with proper length to connect directly to pump impeller. Motor shall contain class b insulation with class f materials rated for continuous duty in 40 degree C liquid. Motor shall be sized so the nameplate horsepower is the actual continuous brake horsepower output without considering motor service factor. Motors shall be explosion proof containing underwriter's approved label.
- B.
 - 1. Multiple row lower bearings for axial thrust and a single row upper bearing for radial thrust shall support the motor/pump shafts. Thrust bearings shall be restrained from thrust in both directions. Designs that do not protect the pump/motor from thrust in reverse directions shall not be acceptable.
 - 2. Bearings shall be sealed and grease lubricated.
- C.
 - 1. Each pump shall be provided with an enclosed block mechanical seal with the seal housing and spring system constructed of AISI 316 stainless steel. The block seal housing shall be constructed such that it can be dismantled allowing the seal faces and springs to be renewed and the seal system to be put back into service. Cartridge seals constructed such that they cannot be repaired or renewed shall not be acceptable. Both upper and lower seal faces shall be silicon carbide versus silicon carbide.
 - 2. The seal shall be mounted in a separate and isolated seal chamber. The seal chamber shall be filled with non-conductive lubricating oil as recommended by the manufacturer.
 - 3. A moisture sensor shall be furnished to sense seal failure for each pump. This sensor shall be wired to the Pump Control Panel (specified in Division 16) and shall activate an alarm light upon seal failure. The sensor probe shall be mounted in the seal chamber and shall be of the conductive type, sensing moisture intrusion above the lower seal, but below the upper seal. Designs which sense seal failure above the upper seal through the use of a float switch are not acceptable.
- D. Motor shall conform to the current issue of national electrical code, section

501-5, Para. (D) and section 501-8, Para. (A). All pumps, motors, fittings, accessories and controls shall be 100% American made.

1.6 GUIDE RAIL ASSEMBLY

- A. Furnish each pump with slide away coupling that are designed such that the pumping units can be removed from the wet well without entering the well or disconnecting the piping. The slide away coupling shall consist of a cast iron foot mounted discharge elbow with integral cast mounting base plate, sliding pump adapter, rail guides, lifting yoke and upper rail supports. All metal faces where movement can occur will be non-sparking.
- B. The guide rail pipes shall be 2" furnished by the contractor. Two guide rail pipes per pump are required.

631.02.5 Access Frame and Cover Specification: Access frames and covers shall have a 1/4" thick one-piece, mill finish, extruded aluminum frame, incorporating a continuous concrete anchor. Door panels shall be 1/4" aluminum diamond plate, reinforced to withstand a live load of 300 lbs. Psf. Doors shall open to 90 degrees and automatically lock with stainless steel hold open arms with aluminum release handles. Doors shall close flush with the frame lifting handles, hinges, hinges and all fastening hardware shall be stainless steel. Unit shall lock with a non-corrosive locking bar. Unit shall be guaranteed against defects in material and/or workmanship for a period of 10 years. They shall be single leaf with openings sizes per contract drawings, as manufacturer by Halliday Products, Inc. or approved equal

631.02.06 DISCHARGE PIPING: All piping shall be ductile iron flanged joint pipe, ANSI A 21.51 and all joints and fittings shall be Ductile Iron ANSI A 21.10.

All Ductile Iron Pipe and Fittings shall be coated outside with a standard bituminous coating and lined inside with a P-401 coating.

631.02.07 GATE VALVE: Gate valves shall be in accordance with AWWA C-500 Standards, iron body, bronze mounted, double disc, parallel seat, non-rising stem, flanged ends, handwheel operated and complete with bolts, gaskets, and coatings.

631.02.08 CHECK VALVE: Check valves shall be in accordance with AWWA Standards, iron body, bronze mounted, flanged ends, lever and weight operation and complete with bolts, gaskets, and coatings.

631.02.09 WET WELL: Concrete for the wet well shall be furnished in accordance with the applicable requirements of reference ASTM L 76, ASTM C443 and ASTM C 478.

631.02.10 SECURITY FENCE: The security fence shall be constructed using the

materials and details shown on the contract drawings.

631.02.11 BOLTS, WASHERS, AND FASTENERS: All bolts, washers, and fasteners shall be high strength stainless steel meeting the requirements as set forth in ASTM-A 325. All bolted connections shall have threads excluded from the shear plane.

631.02.12 FORCE MAINS: All force mains shall be PVC Fluid-Tite Intergral Bell plastic pipe for sewer and shall meet the requirements of 160 PSI, SDR 26 pressure pipe, and shall meet the standard specifications as outlined in ANSI/ASTM D 2241-78. All sections shall be tested under a hydrostatic pressure of 100 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.

All fittings to be mechanical joint cast or ductile iron. A green metallic tape with the word "SEWER" printed in bold letters and at a maximum of 3 feet spacing on the tape shall be secured to the top side of the force main.

631.02.13 AIR AND VACUUM SEWER VALVE:

The air and vacuum valve shall be able to automatically exhaust large quantities of air during filling of a pipeline and allows air to re-enter pipeline during the draining or when a negative pressure occurs. The inlet and outlet of the valve shall have the same cross-section area. The float shall be guided by a synthetic rubber seal. The float shall be of all stainless steel construction and capable of withstanding maximum system surge pressure without failure. The body and cover shall be concentrically located and of ductile iron and the valve internal parts shall be of stainless steel with Buna-N® rubber seat.

The Air and Vacuum Valve shall be manufactured per ANSI/AWWA C512-04 Series 35WW 2" x 1" with optional backwash kit from Cla-Val Newport Beach, CA, U.S.A. or approved equal

Specifications Sizes

2", 3", 4" NPT

4", 6" 8" flanged ANSI

Class 125 lb.

Class 250 lb.

Pressure Rating

150 psi & 300 psi ratings

NOTE: SPECIFY WHEN
OPERATING PRESSURE
BELOW 10 PSI

Materials

Body and Cover:

Ductile Iron ASTM A536

65-45-12

Float:

Stainless Steel

Internal Parts:

Stainless Steel

Seal:

Buna-N® Rubber

The valve shall be mounted on a 4" cast iron fitting installed in the force main. Special consideration should be given so that the valve is stable. The valve and appurtenances shall be installed in a 36" diameter concrete manhole with a Dewes DF-25(7) J.S. or Vulcan V-1115 Frame and cover.

The air and vacuum sewer valve assembly includes all the items described above plus any additional items required to install the assembly and make it functional.

WATER SYSTEMS

1. GENERAL

a. 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. APPLICABLE PUBLICATIONS

a. 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.

i. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- (1) A 139 Electric-Fusion (Arc) welded steel pipe (sizes 4 inch and over).
- (2) A 252 Welded and Seamless steel pipe piles.
- (3) Making and Curing Concrete Compressive and Flexural Strength Test Specimens in the Field.
- (4) C 33 Concrete Aggregates
- (5) C 39 Test for Compressive Strength of Cylindrical Concrete Specimens.
- (6) D 2922 Density of Soil Aggregate in place by the clear Method (shallow depths).

ii. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- (1) 21.10 Gray Iron and Ductile Iron Fittings, 3 inch through 48 inch for Water and other Liquids.
- (2) Rubber Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings.
- (3) Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-line Molds, for Water or other Liquids.

iii. AMERICAN WATER WORKS ASSOCIATION (AWWA)

- (1) C 104 Cement-Mortar Lining for Cast Iron Pipe and Fittings for Water and Other Liquids.
- (2) C 106 Cast Iron Pipe Centrifugally Cast in Metal Molds, for water and other Liquids.
- (3) C 110 Gray Iron and Ductile Iron Fittings, 3 inch through 48 inch, for Water and Other Liquids.
- (4) C 111 Rubber Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings.
- (5) C 150 Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or other Liquids.

iv. AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS (AASHTO)

- (1) T-88 Particle Size Analysis of Soils.
- (2) T-89 Determining the Liquid Limit of Soils.
- (3) T-90 Determining the Plastic Limit and Plasticity Index of Soils.
- (4) T-99 Moisture Density Relations of Soils Using a 5.5 lb. Rammer and 12 inch Drop.
- (5) T-191 Density of Soil In-Place by the Sand-Cone Method.

v. MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Standard Specifications for Road and Bridge Construction, current edition.

3. SUBMITTALS

a. 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.

- i. 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:

- (1) Joints: The following shall be required for ductile iron joints.
 - (2) Drawings or Manufacturer's Catalogue data indicating dimensions and tolerance.
 - (3) 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.
 - (4) 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).
- ii. Ductile Iron Pipe: Submittal Shall Include the Results of the following. Sampling procedure shall be as indicated in ANSI 21.51.:
- (1) Tension Test
 - (2) Impact Test
 - (3) Low Temperature Impact Test.
- iii. PVC Pipe: The Contractor shall furnish manufacturer's certificates certifying that the pipe and fittings conform to the requirements of these specifications and appropriate construction drawings.

4. MATERIALS – WATER SYSTEM:

a. Ductile Iron Pipe:

- i. Ductile iron pipe shall be designed in accordance with the latest revision of ANSI/AWWA C51/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.
- ii. 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.

- iii. 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.
- iv. 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.
- v. 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.
- vi. 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. PVC PIPE

- i. All PVC pipes for this project shall be SDR 26, Class 160 psi, confirming to the latest edition of ASTM D2241, "*Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)*."
- ii. All PVC SDR Series pipe shall be manufactured from a Type I, Grade I Polyvinyl Chloride (PVC) compound with a Cell Classification of 12454 per ASTM D1784. The pipe shall be manufactured in strict compliance to ASTM D2241, consistently meeting and/or exceeding the Quality Assurance test requirements of this standard with regard to pressure rating, material, workmanship, burst pressure, flattening, impact resistance, and extrusion quality.
- iii. The pipe shall be manufactured in the USA, using domestic materials, by an ISO 9001 certified manufacturer. Standard lengths of pipe sizes 8" and larger shall be beveled on each end by the pipe manufacturer. All pipes shall be stored indoor after production at the manufacturing site until shipped from factory. This pipe shall carry the National Sanitation Foundation (NSF) seal of approval for potable water applications.

c. Gate Valves: Where indicated on the Plans or directed by the ENGINEER, the CONTRACTOR shall furnish and install gate valves as hereinafter specified.

- i. All gate valves shall be cast iron mechanical joint, M.J., Mueller A-2380-20,

equivalent or better.

- ii. All gate valves shall be furnished with O-ring packing and 2" square operating nut, AWWA 200lb., for cast iron water main.
- iii. Valve boxes shall be cast iron top and bottom. Extension pieces shall be provided as required.
- iv. Payment for furnishing and installing gate valves with box shall be made at the contract unit price per valve according to type and size as listed in the proposal.
- v. 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.
- vi. 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.

d. Fittings, Valves and Hydrants, Etc.:

- i. 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.
- ii. 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.
- iii. 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.

- iv. 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.
 - v. 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.
 - vi. The prices bid furnishing and installing valves, fittings, etc., shall include compensation for furnishing mechanical joint restraints as required at beds, tees, plugs and caps. No separate or extra compensation will be allowed for any of the above specified incidental work or material.
- e. Plugs and Caps:
- i. 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 "deadend" lines are installed, the ends of such lines shall be plugged or capped as required.
 - ii. 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 shall make the tap as directed by the Engineer.
- f. 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 0.375 inch.
- 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:)

SIZE NO. 467

Nominal Size (Sieves w/Square Openings)	Percent Passing by Weight
2"	100
1 - 1/2"	0 - 5
No. 4	35 - 70
3/8"	10 - 30
3/4"	95 - 100

h. 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 1 - 1/2" sieve.

i. Concrete: Concrete shall be in accordance with the requirements of Technical Specifications – CONCRETE

j. Select Backfill:

- i. 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.
- ii. 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.
- iii. The composite selected sand-clay material passing the Number 10 sieve shall conform to the following minimum and maximum gradation limits:

Sieve	Percent Passing by Weight
Number 40	40
Silt (.05 to .005 mm)	30
Number 270	8
Clay (Passing .005 mm)	3
Number 60	3

- iv. Backfill: All other backfill shall consist of excavated material removed from the trench.

5. CONSTRUCTION:

a. Earthwork:

i. Site Preparation:

- (1) Topsoil shall be stripped and stockpiled in accordance with Technical Specifications.
- (2) 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.
- (3) 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:

- i. 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.

- ii. 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.
- iii. 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.
- iv. 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:

- i. 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.
- ii. 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:

- i. 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.

- ii. 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:

- i. 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.
- ii. Holes for the bells shall be provided at each joint in the subgrade 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.

iii. Stabilization Materials: When the subgrade is found to be unstable or to include ashes, refuse, organic material, or other unsuitable material, the Engineer may direct that the subgrade 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.

iv. Bedding Materials:

(1) 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.

(2) 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 a minimum of 90% of maximum laboratory density, with AASHTO T-99.

v. 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.

vi. 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.

g. Backfilling: Upon completion of placement of select material the excavated materials shall be immediately placed back into the trench. Specific requirements are:

- i. Backfill requirements for road crossings, parking lots, driveways, and sidewalks shall be in accordance with Technical Specifications
 - ii. 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.
 - iii. No debris shall be used as backfill which has a volume in excess of one-half of one cubic foot or weight excess of 75 pounds.
- h. 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.
- i. Grading and Grassing: Final grading and grassing shall be in accordance with Technical Specifications.
- j. 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.
- k. PIPE LAYING:
- i. 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.
 - ii. The water main shall maintain a minimum of 30 inches of cover at all times.
 - iii. 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.

I. 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.

i. 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.

ii. 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.

iii. 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.

iv. All joints of whatever type shall be completely water tight after being subjected to the required tests.

m. 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.

i. 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.

ii. 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.

iii. 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.

- iv. 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.

- 6. SEPARATION of WATER and SEWER MAINS: The water and sewer specifications should state that the water line be constructed no less than 10 feet horizontally and 18" vertically with water line over sewer line. If those conditions cannot be met then they will be decided on a case by case basis.

7. TESTING

a. Ductile Iron Pipe:

- i. 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.
- ii. 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.

- b. Steel Casing Pipe: Material test shall be included as part of the submittal. No other material test shall be required.

c. Compaction Tests:

- i. 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.
- ii. 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 C.Y.
Bedding Material	2	One per 600 L.F.
Tampered Backfill	2	One per 600 L.F.

d. Hydrostatic Testing:

- i. After the pipe has been laid, all newly laid pipe or any valved section thereof shall be subjected to a hydrostatic pressure of at least 1.5 times the working pressure at the point of testing and not less than 1.25 times the working pressure along the test section, for a minimum of 2 hours.
- ii. And all test shall be in accordance with AWWA Standard C600-82, Section 4.
- iii. Allowable leakage shall be no more than that determined by the following formula:

$$L = \frac{SD\sqrt{P}}{133,200}$$

- iv. In which L is the allowable leakage in gallons per hour; S is the length of pipe tested in feet; D is the nominal diameter of the pipe, in inches; and P is the average test pressure during the leakage test in pounds per square inch.
- v. 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. Record of testing is to be furnished to the OWNER.

8. CLEANING AND STERILIZING:

- a. 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 sterilized 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.
- b. 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.
- c. All water mains will be flushed, chlorinated and rechlorinated until two (2)

consecutive negative water samples are obtained by the Local Health Department. The samples shall be collected by the Certified Operator of the system or the Professional Engineer of the project.

d. 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.

9. WATER SERVICE

a. Service pipe shall be ¾" Polyethylene Plastic tubing meeting the following specifications:

1. 200 PSI and complying with AWWA standards when tested by methods ASTM 1599, copper tube size (O.D.) farmable for use with standard heavy duty waterworks brass flare fittings.

2. Tubing shall comply with the standards and bear the seal of the National Sanitary Foundation.

3. All connections and fittings shall be Ford brand.

10. TRACER WIRE

a. Materials

1. General

i. All trace wire and trace wire products shall be domestically manufactured in the U.S.A.

ii. All trace wire shall have HDPE insulation intended for direct bury, color coated per APWA standard for the specific utility being marked, green for Sewer.

2. Trace wire

- i. Open Trench - Trace wire shall be #12 AWG Copper Clad Steel, High Strength with minimum 450 lb. break load, with minimum 30 mil HDPE insulation thickness.**
- ii. Directional Drilling/Boring - Trace wire shall be #12 AWG Copper Clad Steel, Extra High Strength with minimum 1,150 lb. break load, with minimum 30 mil HDPE insulation thickness.**
- iii. Pipe Bursting/Slip Lining - Trace wire shall be 7 x 7 Stranded Copper Clad Steel, Extreme Strength with 4,700 lb. break load, with minimum 50 mil HDPE insulation thickness.**

3. Connectors

- i. All mainline trace wires must be interconnected in intersections, at mainline tees and mainline crosses. At tees, the three wires shall be joined using a single 3-way lockable connector. At Crosses, the four wires shall be joined using a 4-way connector. Use of two 3-way connectors with a short jumper wire between them is an acceptable alternative.
- ii. Direct bury wire connectors – shall include 3-way lockable connectors and mainline to lateral lug connectors specifically manufactured for use in underground trace wire installation. Connectors shall be dielectric silicon filled to seal out moisture and corrosion, and shall be installed in a manner so as to prevent any uninsulated wire exposure.
- iii. Non locking friction fit, twist on or taped connectors are prohibited.

4. Termination/Access

- i. All trace wire termination points must utilize an approved trace wire access box (above ground access box or grade level/in-ground access box as applicable), specifically manufactured for this purpose.
- ii. All grade level/in-ground access boxes shall be appropriately identified with “water” cast into the cap and be color coded.
- iii. A minimum of 2 ft. of excess/slack wire is required in all trace wire access boxes after meeting final elevation.
- iv. All trace wire access boxes must include a manually interruptible conductive/connective link between the terminal(s) for the trace wire connection and the terminal for the grounding anode wire connection.
- v. Grounding anode wire shall be connected to the identified (or bottom) terminal on all access boxes.
- vi. Service Laterals - Trace wire must terminate at an approved grade level/inground trace wire access box, located at the edge of the road right-of-way, and out of the roadway.
- vii. Hydrants – Trace wire must terminate at an approved above-ground trace wire access box, properly affixed to the hydrant grade flange. (affixing with tape or plastic ties shall not be acceptable)

- viii. Long-runs, in excess of 500 linear feet without service laterals or hydrants
- Trace wire access must be provided utilizing an approved grade level/in-ground trace wire access box, located at the edge of the road right-of-way, and out of the roadway. The grade level/in-ground trace wire access box shall be delineated using a minimum 48" polyethylene marker post, color coded per APWA standard for the specific utility being marked.

5. Grounding

- i. Trace wire must be properly grounded at all dead ends/stubs
- ii. Grounding of trace wire shall be achieved by use of a drive-in magnesium grounding anode rod with a minimum of 20ft of #12 red HDPE insulated copper clad steel wire connected to anode (minimum 1.5 lb.) specifically manufactured for this purpose, and buried at the same elevation as the utility.
- iii. When grounding the trace wire at dead ends/stubs, the grounding anode shall be installed in a direction 180 degrees opposite of the trace wire, at the maximum possible distance.
- iv. When grounding the trace wire in areas where the trace wire is continuous and neither the mainline trace wire or the grounding anode wire will be terminated at/above grade, install grounding anode directly beneath and in-line with the trace wire. Do not coil excess wire from grounding anode. In this installation method, the grounding anode wire shall be trimmed to an appropriate length before connecting to trace wire with a mainline to lateral lug connector.
- v. Where the anode wire will be connected to a trace wire access box, a minimum of 2 ft. of excess/slack wire is required after meeting final elevation.

b. Installation

1. General

- i. Trace wire installation shall be performed in such a manner that allows proper access for connection of line tracing equipment, proper locating of wire without loss or deterioration of low frequency (512Hz) signal for distances in excess of 1,000 linear feet, and without distortion of signal caused by multiple wires being installed in close proximity to one another.
- ii. Trace wire systems must be installed as a single continuous wire, except where using approved connectors. No looping or coiling of wire is allowed.

- iii. Any damage occurring during installation of the trace wire must be immediately repaired by removing the damaged wire, and installing a new section of wire with approved connectors. Taping and/or spray coating shall not be allowed.
- iv. Trace wire shall be installed at the bottom half of the pipe and secured (taped/tied) at 5' intervals.
- v. Trace wire must be properly grounded as specified.
- vi. Trace wire on all service laterals/stubs must terminate at an approved trace wire access box located directly above the utility, at the edge of the road right-of-way, but out of the roadway. (See Trace wire Termination/Access)
- vii. At all mainline dead-ends, trace wire shall go to ground using an approved connection to a drive-in magnesium grounding anode rod, buried at the same depth as the trace wire. (See Grounding)
- viii. Mainline trace wire shall not be connected to existing conductive pipes. Treat as a mainline deadend, ground using an approved waterproof connection to a grounding anode buried at the same depth as the trace wire.
- ix. All service lateral trace wires shall be a single wire, connected to the mainline trace wire using a mainline to lateral lug connector, installed without cutting/splicing the mainline trace wire.
- x. In occurrences where an existing trace wire is encountered on an existing utility that is being extended or tied into, the new trace wire and existing trace wire shall be connected using approved splice connectors, and shall be properly grounded at the splice location as specified.

2. Water System

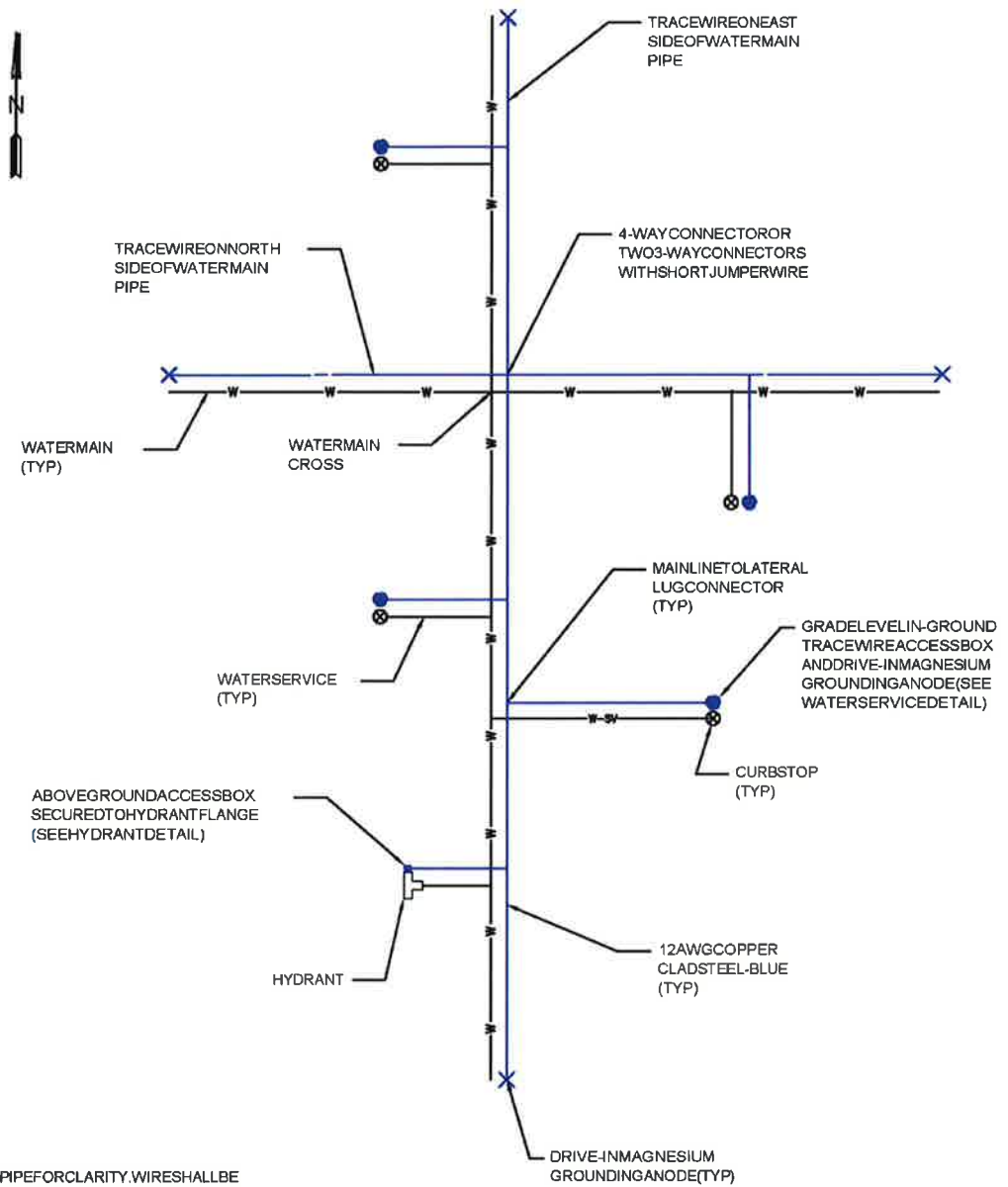
- i. A mainline trace wire must be installed, with all service lateral trace wires properly connected to the mainline trace wire, to ensure full tracing/locating capabilities from a single connection point.
- ii. Lay mainline trace wire continuously, by-passing around the outside of valves and fittings on the North or East side.
- iii. Trace wire on all water service laterals must terminate at an approved trace wire access box color coded blue and located directly above the service lateral at the edge of road right of way.
- iv. Above-ground tracer wire access boxes will be installed on all fire hydrants.
- v. All conductive and non-conductive service lines shall include tracer wire.

c. Prohibited Products and Methods

1. The following products and methods shall not be allowed or acceptable
 - i. Uninsulated trace wire
 - ii. Trace wire insulations other than HDPE
 - iii. Trace wires not domestically manufactured
 - iv. Non locking, friction fit, twist on or taped connectors
 - v. Brass or copper ground rods
 - vi. Wire connections utilizing taping or spray-on waterproofing
 - vii. Looped wire or continuous wire installations, that has multiple wires laid side-by-side or in close proximity to one another
 - viii. Trace wire wrapped around the corresponding utility
 - ix. Brass fittings with trace wire connection lugs
 - x. Wire terminations within the roadway, i.e. in valve boxes, cleanouts, manholes, etc.
 - xi. Connecting trace wire to existing conductive utilities

d. Testing

1. All new trace wire installations shall be located using typical low frequency (512Hz) line tracing equipment, witnessed by the contractor, engineer and facility owner as applicable, prior to acceptance of ownership.
2. This verification shall be performed upon completion of rough grading and again prior to final acceptance of the project.
3. Continuity testing in lieu of actual line tracing shall not be accepted.

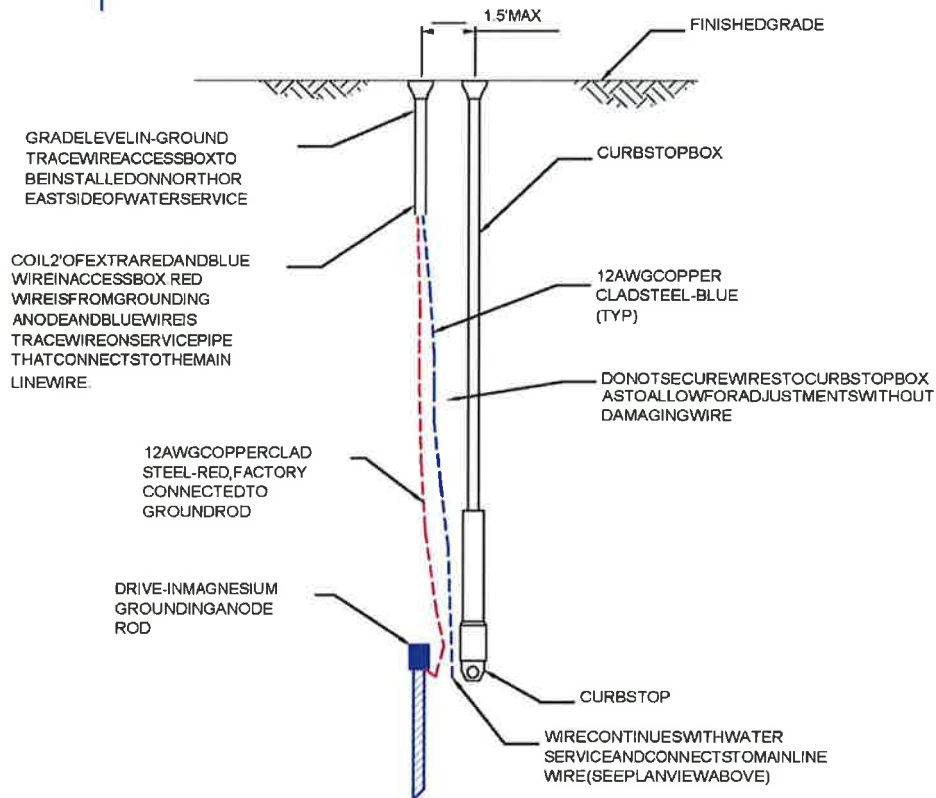
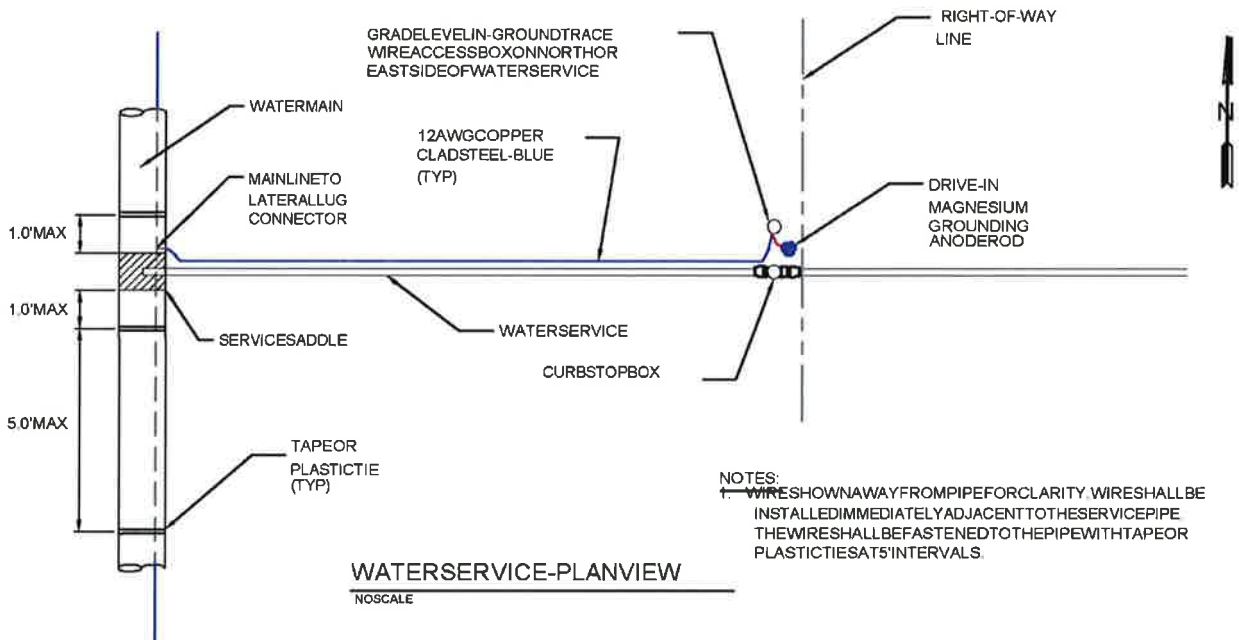


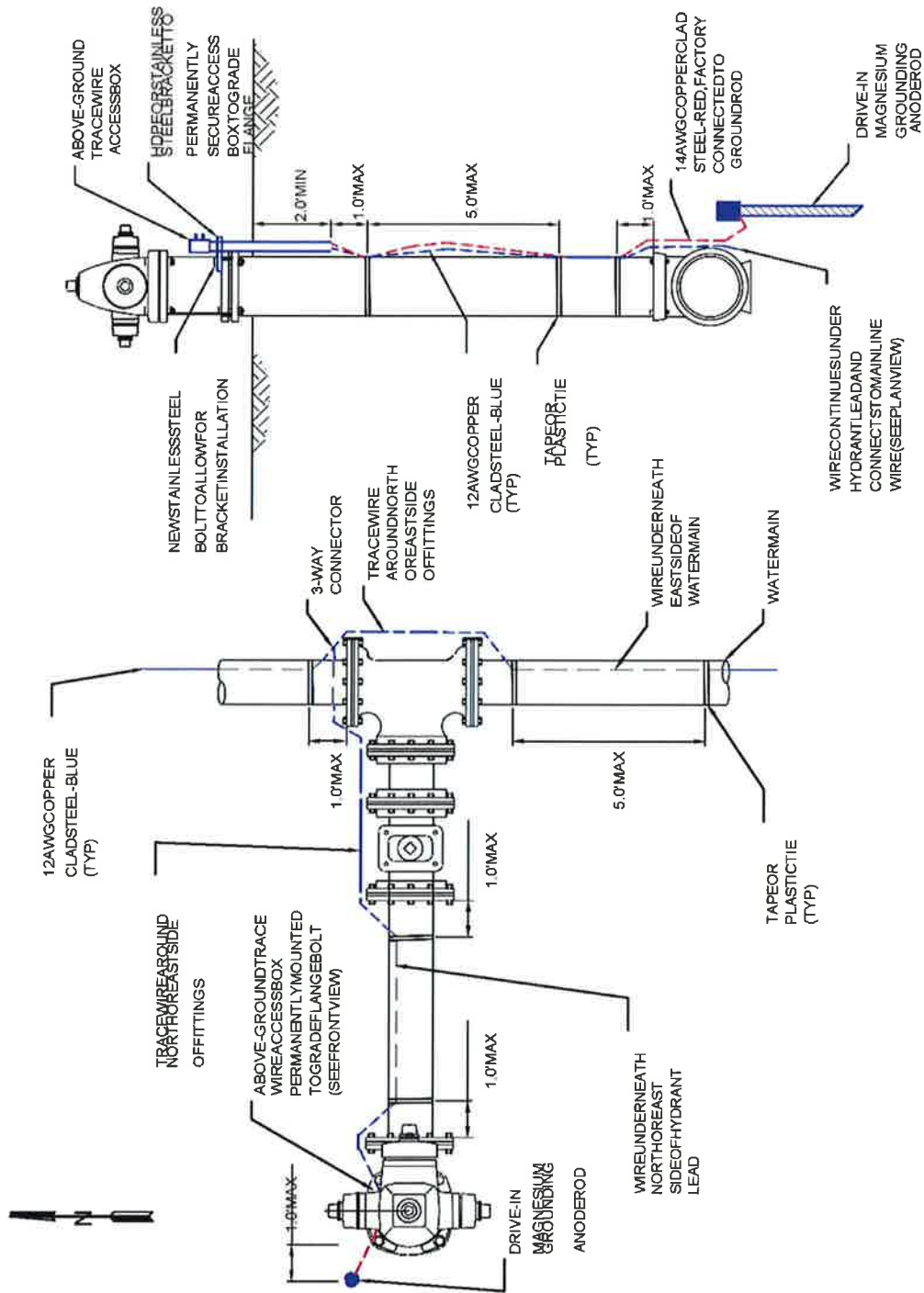
NOTES:

1. WIRES SHOWN AWAY FROM PIPE FOR CLARITY. WIRES SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRES SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS.

TRACEWIRE PLAN (WATER)

NOSCALE





SPECIFICATIONS INDEX

SPECIFICATIONS INCLUDE DIVISIONS 22, 23 AND 26

The Contractor must provide each item mentioned or indicated of quality or subject to qualification noted; perform according to conditions stated each operation prescribed; and provide therefore all necessary labor, equipment, and incidentals for articles, material separations or methods mentioned herein or indicated on the Drawings.

Requirements for the General Conditions, Supplementary Conditions, and Addenda, if issued, shall apply under this Division of Work.

Separation of these Specifications into Divisions and Sections is only for convenience and is not intended to establish limits of work.

Consult index to be certain that set of documents is complete.

INDEX TO DIVISION 22 - PLUMBING

SECTION 22 00 00	Plumbing
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INDEX TO DIVISION 23 - MECHANICAL

SECTION 23 00 00	Mechanical General Requirements
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SECTION 23 05 11	Mechanical System Wiring
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INDEX TO DIVISION 26 - ELECTRICAL

SECTION 26 00 00	General Electrical Provisions
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SECTION 26 05 11	Basic Materials and Methods For Electrical Installations
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SECTION 26 05 21	Electrical Power Conductors and Cables
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SECTION 26 05 26	Grounding and Bonding Systems
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SECTION 26 05 33	Raceways and Boxes for Electrical Systems
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SECTION 26 05 41	Electrical Service and Construction
SECTION 26 24 16	Power Distribution Panelboards Equipment
SECTION 26 32 14	Natural Gas Generator Sets and Service Entrance Rated Automatic Transfer Switch

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SECTION 22 00 00 PLUMBING

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. Natural Gas Piping System.

1.2 SUBMITTALS:

A. Submit product data and shop drawings as required.

B. Include component sizes, rough-in requirements, service sizes.

C. Include certificate of compliance of pipe, fittings, and valves.

1.3 QUALITY ASSURANCE:

A. For each product, provide components by same manufacturer throughout.

PART 2 - PRODUCTS

2.1 NATURAL GAS SYSTEM:

A. Main and Service Piping: Polyethylene pipe conforming to ASTM D 2513, SDR 11.5, with fittings confirming to ASTM D 2683. Piping shall be equal to US Poly UAC Ultra-Stripe PE 3408, or equal.

B. Service Regulator: General service type, diaphragm operated, spring adjusted, for reducing main distribution pressure of 30 PSIG to 2 PSIG.

C. Service Risers: "Anodeless" service riser consisting of galvanized steel casing for plastic carrier pipe and an isolated threaded steel gas carrier.

D. Shut-Off Valves for PE Piping: All shut off valves shall have a minimum pressure rating of 100 PSIG.

- 1. Ball Valves:** ANSI B16.40 and ASTM D2513, Class C materials (PE 2306 or PE 3406), strength rating Class 1 locations with factor = 0.32, and SDR matching PE pipe dimensions and working pressure. Valves shall be full bore. Minimum bore size shall be 95 percent of the internal cross sectional area of pipe of the same nominal diameter. Ball valves shall be wrench operated. Wrench operated valves shall have a 2-inch square adapter securely fastened to the valve system. The maximum allowable operating torque in foot-pounds shall be limited to:

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Normal Valve Size (inches)	Torque (Foot-Pounds)
1, 1-1/2, or 2	25
3, or 4	35

- E. Service Piping: Schedule 40 black steel pipe conforming to ASTM A 53 or A 120 with malleable iron fittings conforming to ANSI B16.3 or forged steel welded type fittings conforming to ASTM A 234. Pipe 2-inch and under shall have screw type joints. Pipe 2-inches and larger shall have welded joints conforming to AWS D1.1
- F. Gas Cocks: Cocks up to 2-inches shall have bronze body, bronze tapered plug, non-lubricated, teflon packing, threaded ends. Cocks larger than 2-inches shall have cast-iron body and plug, non-lubricated, teflon packing, flanged ends.

2.2 BURIED WARNING AND IDENTIFICATION TAPE:

- A. Polyethylene plastic or metallic core or metallic-faced, acid and alkali-resistant polyethylene plastic (as applicable) warning tape manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3-inch minimum width, color coded yellow with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED GAS LINE BELOW" or similar wording. Color and printing is to be permanent, unaffected by moisture or soil.
- B. Detectable Warning Tape for Non-Metallic Piping: Polyethylene plastic tape conforming to the width, color, and printing requirements indicated above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. The tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when the tape is buried up to 3 feet deep. Encase the metallic element of the tape in a protective jacket or provide other means of corrosion protection.
- C. Insulated tracer wire may be used along with the Warning Tape.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. General: Installation of plumbing systems including equipment, materials, and workmanship shall be in accordance with all local plumbing, building and fire code requirements.

3.2 INSTALLATION:

- A. Install bell and spigot pipe with bell end upstream. Slope pipe in accordance with the requirements of SBCC Standard Plumbing Code.

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- B. Install specialties in accordance with manufacturer's instructions.**
- C. While under construction, unattended exposed pipelines must have both ends capped. All materials to be used in construction shall be stored above the ground in a manner that will minimize the possibility of contamination.**

3.3 FIELD TESTS:

A. INSTALLATION OF GAS PIPELINES:

1. General Requirements:

- a. Location of Gas Lines:** Do not install gas piping in the same trench with other utilities. The minimum horizontal clearance between gas pipe and parallel utility pipe shall be 2 feet. Do not install gas pipe through catch basins, vaults, manholes or similar underground structures.
- b. Pipe Laying and Jointing:** Pipe, fittings, valves and accessories will be carefully inspected by the Engineer or his authorized representative before and after installation and those found defective will be rejected. Pipe and fittings shall be free from fins and burrs. Before being placed in position, clean pipe, fittings, valves and accessories and maintain in a clean condition. Cut pipe accurately to measurements established at the site and work into place without springing or forcing. Replace any pipe or fitting that does not allow sufficient space for proper installation of jointing material with one of proper dimensions. Grade the pipe in straight lines. Support pipe at its proper elevation and grade, taking care to secure firm and uniform support. Wood support blocking will not be permitted. The full length of each section of pipe and all fittings shall rest solidly on the pipe bed, with recesses excavated to accommodate joints and couplings. Provide anchors and supports where indicated. Keep trenches free of water until joints have been properly made. Close open ends of pipe at the end of each day's work temporarily with wood blocks or plastic end closures. Install plastic warning tape 12 inches above all buried gas lines. All services shall have a minimum earth cover of 18-inches or as indicated on drawings.

2. Special Requirements for Installation of PE, Gas Service Piping:

- a. Installation shall be in accordance with the general requirement for installation of pipelines and with the applicable requirements of ANSI B 31.8. Installation of PE pipe or tubing shall further be in accordance with the applicable requirements of ASTM D 2774. Minimum earth cover for service lines shall be 18 inches or as indicated on drawings. Install a TW insulated electrically conductive No. 10 gauge copper wire with buried PE pipe or tubing to facilitate location with an electronic detector. Install wire 8 to 12 inches above service line. Do not wrap around pipe.**

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- b. Earthwork shall be in accordance with requirements set forth in other Sections and for PE pipe or tubing the applicable requirements of ASTM D 2774.

3. Joints:

- a. PE pipe or Tubing: Make joints for PE pipe or tubing and fittings in accordance with ANSI B 31.8 and the recommendations of the manufacturer of the pipe or tubing and fittings.
- b. Valve Installation on PE Service Lines: Restrain all curb cocks installed on PE Service lines so that no turning torque can be transmitted to the pipe.

B. PROTECTION AGAINST CORROSION:

- 1. General: All buried metallic gas pipe, fittings, and accessories installed on outside gas systems shall be shop coated as previously specified and cathodically protected by galvanic anodes. All valves and other metallic components installed on buried plastic tubing shall also be shop coated and cathodically protected. Paint all metallic piping, fittings, and accessories aboveground. Electrically isolate all metallic pipe from other underground metallic structures, including metallic casings. After completing pressure tests, wrap all joints and damaged areas of shop coatings with plastic tape as specified in paragraph "Application of Plastic Tape", or coat using material and procedures recommended by the manufacturer of the pipe shop-coating.

2. Installation:

- a. Application of Plastic Tape: Field apply plastic tape to pipe joints, and damaged areas of coatings. The joint area to be taped shall be clean and free of burrs and rust. Smooth down or cut away damaged coating if not firmly bonded to the pipe. Wrap spirally with a two-layer wrapping system, overlapping in coating surface at least 3 inches. Initially stretch the tape sufficiently to conform to the surface to which it is applied, using one layer half-lapped for tape 2 inches or less in width, or one layer lapped at least one inch for tape more than 2 inches wide. A second layer lapped as above, with a tension as it comes off the roll shall then be applied and pressed to conform to the shape of the component.

3.4 NATURAL GAS PIPING:

- A. Exterior Distribution System: The Installer shall provide the entire system of underground service lines included in the contract to be gastight by air test under pressure of 100 pounds per square inch gauge. The test may be made on the system as a whole or part. The test shall continue for at least 24 hours between the times of the initial and final readings or pressure on a recorder. The test of the system shall be verified by the Engineer.

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- B. Purge service lines before placing in service in accordance with ANSI B 31.8, Section 841.275.**

END OF SECTION

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SECTION 23 00 00 MECHANICAL GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. The general provisions of the Contract, including General Provision, DIVISION 1 - GENERAL REQUIREMENTS, apply to the work specified in this Division, with additions and modifications specified herein.**

1.2 APPLICATION:

- A. This section applies to all sections of Division 23 00 00 - Mechanical Work of these specifications, including modifications and additions specified in each individual section.**

1.3 DESCRIPTIONS OF WORK:

- A. The work covered by this Division of these Specifications consist of furnishing all plant, labor, equipment, appliances, and materials, and in performing all operations in connection with the mechanical work, including all items of special equipment specified herein, complete in strict accordance with all Drawings and Specifications sections for this project.**

1.4 SITE CONDITIONS:

- A. Before submitting a proposal for the work contemplated in these Specifications and accompanying Drawings, each bidder shall examine the site and familiarize himself with all the existing conditions and limitations, and review. No extras will be allowed because of the Contractor's misunderstandings as to the amount of work involved or his lack of knowledge of any condition in connection with the work.**

1.5 PERMITS AND INSPECTIONS:

- A. This Contractor shall secure and pay all permits and inspections required on work performed under this section of the contract Specifications. He shall assume full responsibility for all assessments and taxes necessary for completion and acceptance of this work.**

1.6 APPLICABLE CODES AND STANDARDS:

- A. All materials and workmanship shall comply with all applicable codes,**

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specifications, federal and state laws, local ordinances, industry standards and utility company regulations. In case of difference between building codes, Specifications, Federal and State laws, local ordinances, standards and utility company regulations and the Contract Documents, the most stringent requirement shall govern. The Contractor shall promptly notify the Engineer in writing of such difference. Should the Contractor perform any work that does not comply with requirements of the applicable building codes, Federal and State laws, local ordinances, industry standards, and utility company regulations, he shall bear all costs arising in correcting the deficiencies. Applicable Codes and Standards shall include all state laws, State Board Health and State Rating Bureau, local ordinances, industry standards, and utility company regulations, and the applicable requirements of the following national accepted codes and standards:

Standard Mechanical Code
Standard Building Code
Standard Plumbing Code
National Electrical Code
Standard Gas Code

American Society of Heating, Refrigeration & Air Conditioning Engineers
American Society of Mechanical Engineers

American Society of Testing Materials
American Water Works Association

National Electrical Manufacturer's
Association National Fire Protection
Association

Sheet Metal & Air Conditioning Contractors National Association

1.7 APPROVAL OF MATERIALS AND EQUIPMENT:

- A. Quality Standards: See SECTION _____.**
- B. Approval of Substitutions: See SECTION _____.**

1.8 DEVIATIONS:

- A. The Mechanical Drawings show the general arrangement of all piping, equipment, and appurtenances and shall be followed as closely as actual building construction and the work of other trades will permit. The mechanical work shall conform to the requirements shown on all of the Drawings. General and Structural Drawings shall take precedence over Mechanical Drawings. If major departures from the contract Drawings are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as practicable for approval. No major departures shall be made without prior written approval.**

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1.9 COOPERATION:

- A. Cooperate and coordinate with others in laying out work so that this phase of the work will properly fit the building and other contractor's requirements. Priority of locations shall be as follows:
 Mechanical Piping Mains
 Electrical Feeders**

1.10 OPERATING AND MAINTENANCE INSTRUCTIONS:

- A. Bound Instructions: Four (4) complete sets of instructions containing the manufacturer's operating and maintenance instructions for each piece of equipment shall be furnished to the Engineer prior to final payment. Each set shall be permanently bound and shall have a hard cover. Flysheet shall be placed before instructions covering each subject.**
- B. Field Instructions: Upon completion of the work and at a time designated, the services of one project engineer shall be provided by the Contractor to instruct the representative of the Owner in the operation and maintenance of the mechanical systems. Written verification of such field instruction shall be provided to the Engineer prior to final payment.**

1.11 RECORD DRAWINGS:

- A. This Contractor shall provide as-built Drawings at completion of job. Drawings to show all significant changes in piping, equipment, wiring, etc. The actual location of all piping drains, clean-outs, apparatus and equipment shall be indicated. These Drawings are to be turned over to the Engineer prior to final payment. All cleanouts and concealed equipment (below grade) to be dimensioned from building lines, etc.**

1.12 CONNECTION OF EQUIPMENT FIXTURES FURNISHED BY OTHERS:

- A. This Contractor shall provide all necessary materials and labor to connect to the mechanical systems all equipment and fixtures having mechanical connection and which are specified in other Divisions of the project Specifications. Drainage connections shall be trapped. The supply and return lines for each item of equipment or fixture, except control valves with integral stops, shall be provided with cut-off valves to enable isolation of the item for repair and maintenance without interfering with the operation of other equipment or fixtures. Refer to other Divisions of the project Specifications for additional requirements. Actual rough-in dimensions shall be obtained from shop Drawings or measurements of the equipment or fixture.**

1.13 ELECTRICAL:

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- A.** Refer to the Electrical Drawings and Division 26, ELECTRICAL WORK, for the characteristic of the available electrical power. All motors and equipment under this contract to be compatible with the local voltages.
- B.** For each and every motor installed under this section of the contract, furnish to the Electrical Contractor for installation the proper motor starter, where not specified to be furnished by the electrical contractor in the motor control center. The Electrical Contractor will wire from service to starter to motor. Any additional secondary control circuits, such as remote control stations, and temperature control wiring shall be provided under this Division. Each and every wire in each and every junction box,

starter, pull box or where else terminating or connecting or visible shall be color coded and numbered using Brady Stick-On numbers or equivalent.
- C.** All wiring installed under the responsibility of this Contractor shall be in conduit and in strict accordance with the National Electrical Code and DIVISION 26, ELECTRICAL WORK of the project Specifications.

1.14 WORKMANSHIP:

- A.** All work shall be executed in a neat and substantial manner by skilled workmen well qualified and regularly engaged in the type of work required. Substandard work shall be removed and replaced by the Contractor at no cost to the Government.

1.15 CUTTING AND PATCHING:

- A.** This Contractor shall provide all cutting, digging, etc., incident to his work and shall make all required repairs thereafter to the satisfaction of the Engineer, but in no case shall the Contractor cut into any major structural element beam or column without written approval of the Engineer. Pavements, sidewalks, roads, curbs, walls, ceilings, floors and roofs shall be cut, patched, repaired and/or replaced as required to permit the installation of the work and such cutting, patching, repairing, and replacing shall be the responsibility of and paid for by the Contractor under this section of the Specifications. See Drawings for other requirements.

1.16 CLEANING AND PAINTING:

- A.** The respective Contractors or Sub-contractors for the various phases of the work shall clear away all debris, surplus materials, etc., resulting from their work or operations, leaving the job and equipment furnished under any or all Contracts in a clean first class condition.
- B.** All plumbing fixtures shall be thoroughly cleaned of all plaster, stickers, rust stains and other foreign matter or discoloration, leaving every part in an

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acceptable condition and ready for use. The surfaces of all pumps, motors, floor drains, cleanouts and other equipment shall be cleaned and each item shall be left in a first class condition.

- C. Painting of materials and equipment furnished under the mechanical portion of the Contract is specified under the General Construction Contract as described in other Sections. The Contractor shall, however, refinish and restore to the original conditions and appearance, all mechanical equipment which has sustained damage to manufacturer's prime and finish coats of enamel or paint. Materials and workmanship shall be equal to the requirements described for other painting.

1.17 MECHANICAL DEMOLITION AND CLEANUP:

- A. Contractor shall visit the site to determine the existing conditions and review the items of work required to establish the planned and specified construction work. All utility outages shall be approved by Owner and Engineer. Any damage during this contract, to existing utility lines serving the building, shall be properly repaired and reactivated at no expense to the Owner. Haul all debris, from the site before any significant accumulation appears. Removal shall be done without undue noise, dust, and shall be accomplished without interfering with normal base operations.

1.18 EQUIPMENT SAFETY:

- A. Belts, pulleys, chains, gears, couplings, projecting setscrews, keys, rotating parts, and other power transmission apparatus, located so that any person can come in close proximity thereto, shall be fully enclosed or properly guarded in accordance with OSHA 1910.219. Provide positive means of locking out equipment so that it cannot be accidentally started during maintenance procedures. High-temperature equipment and piping so located as to endanger personnel or create a fire hazard shall be properly guarded or covered with insulation of a type as specified.

1.19 DELIVERY AND STORAGE:

- A. Equipment and materials shall be handled, stored, and protected to prevent damage before and during installation in accordance with the manufacturer's recommendations, and as approved by the Engineer. Damaged or defective items shall be replaced.

1.20 STANDARD PRODUCTS/SERVICE AVAILABILITY:

- A. Materials and equipment shall be standard products of a manufacturer regularly engaged in the manufacture of such products, which are of a similar material, design and workmanship. The standard products shall have been in satisfactory

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commercial or industrial use for two years prior to bid opening. The two-year use shall include applications of equipment and materials under similar circumstances and of similar size. The equipment items shall be supported by service organizations within 200 miles of the installation. These service organizations shall be able to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

1.21 EXISTING UTILITIES, STRUCTURES AND OTHER PROPERTY:

- A.** Prior to any excavation, it shall be the responsibility of the Contractor to locate and avoid damage to any and all existing water, gas, sewer, electric, telephone and all other underground utilities or structures. The Contractor shall contact the various local utility departments or other responsible agencies and obtain location Drawings, or other assistance in the locations of existing underground work. The Contractor shall repair or pay for all damage caused by his operations to all existing property, public or private, whether it is below or above ground, and shall settle in total cost all damage suits which may arise as a result of his operations.

1.22 GUARANTEE:

- A.** This Contractor shall provide a written guarantee to Government, all work performed under this contract to be free from defects in workmanship and materials for a period of one year from date of final acceptance by Engineer. Any defects arising during this period will be promptly remedied by the Contractor without cost to the Government. Compressors shall have a five (5) year prorated warranty.

\\ PART 2 - NOT APPLICABLE

\\ PART 3 - NOT APPLICABLE

**END OF
SECTION**

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SECTION 23 05 11 MECHANICAL SYSTEM WIRING

1.01 GENERAL

- A. Unless otherwise mentioned herein, the Electrical Contractor shall be responsible for all power wiring of mechanical system. This Contractor is cautioned to familiarize himself with the Mechanical Specification regarding the Electrical Work. Motors shall be installed and mechanically connected by the Mechanical Contractor and electrically connected by the Electrical Contractor. Mechanical Contractor shall be responsible for furnishing to this Contractor all necessary name plate data, equipment power requirements, wiring diagrams, etc., pertaining to the electrical phases of the mechanical installation. Where fuses only are permitted, furnish fusible disconnect with fuse size required by manufacturer of equipment. Obtain written approval of Division 23 contractor of over current size before energizing equipment.**

1.02 CONTROL WIRING:

- A. Control wiring shall be furnished under DIVISION 23 - MECHANICALWORK: Motor Starter and Motor Contactors, related to Mechanical Work, to be mounted in the equipment cabinet or at the mechanical equipment shall be supplied to the Electrical Contractor. All wiring internal of motor control centers, motor starter panel boards, etc., shall be the responsibility of the Electrical Contractor. The Mechanical Contractor shall provide all mechanical equipment starters and motor contactors and the Electrical Contractor shall install and connect the equipment components. Electrical contractor shall provide 120-volt service or as required to the mechanical system control panels for operation of control devices.**

END OF SECTION

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SECTION 26 00 00 GENERAL ELECTRICAL PROVISIONS

PART 1 - GENERAL

1.1 SCOPE:

- A. This Section of the Specifications covers all labor, equipment, supplies and materials, and all operations, including cutting, trenching and backfilling, channeling and chasing necessary for the installation of any required electrical wiring in strict accordance with this Section of the Specifications, the applicable Drawings, and equipment manufacturer recommendations.

1.2 SPECIAL CONDITIONS:

- A. The bidders for the work covered by the Division of the Specifications shall carefully examine the Plans and Specifications to familiarize themselves with the structure and extent of the various contracts and all applicable documents.
 - 1. **Coordination of Work:** The Contractor is responsible for coordinating the work with the City of Hattiesburg Public Works Department, Pearl River Valley EPA, Spire Energy, and all corresponding Contractors associated with this project. The Electrical Contractor is responsible for completion of all electrical items under their Division and cooperating with the General Contractor.
 - 2. The scope of work includes the installation of new natural gas fueled emergency power systems, natural gas line extensions, and underground electrical power sources, outdoor lighting, indoor lighting and electrical circuits, installation of and electrical connection to two sections of a Motor Control Center, connections to new and existing sewer pumps, and modifications for selected facilities for the Cross Creek Parkway Pump Station.
 - 3. **Work Included:** The work involves electrical systems for the building, lighting and pumps as indicated on the Drawings. Generally, the work includes, but is not limited to the following items:
 - a. Installation of natural gas generator and motor control center rated for 277/480-Volt, 3-Phase as indicated on the drawings.
 - b. Installation of new underground feeders and removal of existing feeders to the existing pumps.
 - c. Installation of new underground electrical feeders to the new pumps.
 - d. Installation of lighting poles, LED lights, and underground lighting circuits.
 - e. Installation of underground power circuits from motor control center to the

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- generator for power to serve the generator accessories.
- f. Installation of underground control wiring from the motor control center to the existing and new pumps.
- g. Installation of reinforced concrete pads to support the generator.
- h. All required trenching, and backfilling.
- i. Maintain clean work area.
- j. Testing and adjusting the new emergency power system.

1.3 SITE CONDITIONS:

- A. The Contractor must visit the designated locations and familiarize himself with all existing conditions prior to submitting bid. No change orders will be allowed because of the Contractor's misunderstanding as to the amount of work involved or their lack of knowledge of any condition with the work.

1.4 PERMITS AND INSPECTIONS:

- A. The Contractor shall secure and pay for all taxes, assessments, permits, and inspections required on work performed under this Section of the Specifications.
- B. Additional costs to aid the construction of the local retail utility suppliers shall also be the responsibility of the contractor. Verify any extra costs for underground utility services and coordinate with local retail suppliers. Camp Shelby owns and maintains the existing utility distribution systems.

1.5 APPLICABLE STANDARDS AND CODES:

- A. All materials and workmanship shall comply with all applicable codes, specifications, local ordinances, industry standards and utility company regulations. The following standards and codes form a part of these specifications:
 - 1. International Building Code and Families of Code
 - 2. State, Municipal, Federal and Local Building Code
 - 3. National Electrical Code (NEC)
 - 4. National Fire Protection Association (NFPA)
 - 5. Underwriters Laboratories
 - 6. National Electrical Manufacturer's Association
 - 7. National Electrical Safety Code (ANSI-C2)

1.6 APPROVAL OF MATERIALS AND EQUIPMENT:

- A. Equipment is specified by manufacturer's name and catalog number and is intended to establish the minimum standards of quality acceptable. Substitute

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equipment, equivalent in all respects to that specified, is permitted with the written approval of the Engineer. After contract has been awarded, contractor shall provide submittal sheets on all materials and equipment to the Engineer for final approval before purchase, whether substitutions are being made or not. Three (3) copies of Manufacturer's Brochures and Shop Drawings shall be submitted to the Engineer. A complete electrical connection diagram for each electrically controlled component shall be submitted for approval.

- B. The approval of Manufacturer's Brochures and Shop Brochures shall not relieve the Contractor from any responsibility for deviation, quantities, physical dimensions, available space, etc., unless approved by the Engineer.

1.7 DEVIATIONS:

- A. The Drawings indicate the general arrangement of the electrical work. Details of any major departures deemed necessary by the Contractor shall be submitted to the Engineer for approval. No major departures shall be made without prior written approval.

1.8 FINAL SUBMITTAL:

- A. At the completion of the projects prior to final acceptance, each Contractor shall furnish to the Engineer six (6) complete sets of approved Shop Drawings, together with all warranties, maintenance and operating instructions bound in a folder to the Engineer. This folder shall also contain one copy of each of complete operating instructions. The folder shall contain panel boards with breakers, disconnect switches, light fixtures, equipment control systems, conduits, conductors and any other equipment and system furnished. Special requirements shall include manufacturer's installation instructions furnished with equipment, lubricating manuals and replacement parts manuals.
- B. This Contractor shall provide as-built drawings at the completion of the job showing all significant changes.

1.9 GUARANTEE:

- A. This Contractor shall guarantee to Owner, work performed under this Contract to be free from defects in workmanship and materials for a period of one year from date of final acceptance by the Architect and the Owner. The Contractor will promptly correct any discrepancies identified during this period within a reasonable period without cost to Owner. Lamps and fuses burned out during normal operations after acceptance are exempt from guarantee. Furnish ten percent (10%) spare lamps (minimum of 6) of each type in project properly boxed for storage. Deliver to the Owner as directed by Engineer and furnish written

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verification to Engineer properly signed by Owner.

PART 2 - PRODUCTS (NA)

PART 3 - EXECUTION (NA)

END OF SECTION

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SECTION 26 05 11 BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.1 GENERAL:

- A. MATERIALS:** All electrical materials shall be new and approved by the Underwriters' Laboratories, Inc., wherever standards have been established by that agency.
- B. STANDARD PRODUCTS:** The materials furnished under this Section of the Specifications shall be the standard products of manufacturers regularly engaged in the production of such equipment.
- C. CIRCUITS:** Circuit grouping, conduit or cable runs, and home runs are indicated diagrammatically. Contractor shall provide proper conductors and conduits or cables to produce an operative system and comply with the HVAC system manufacturer's requirements.
- D. HOME RUNS:** Home Runs are indicated on the Drawings but may be regrouped if Contractor desires. In any case, however, no two ungrounded conductors shall be connected to the same ungrounded lug of a breaker or switch.

1.2 WIRING METHODS:

- A.** Unless otherwise specified or indicated on the drawings, branch circuit and feeder wiring located in interior space shall consist of insulated conductors in rigid type conduits. Wiring connections to exterior equipment shall be in rigid type conduit with seal tight weather proof flexible connections (up to six feet) from disconnect switches to equipment.

1.3 CONDUIT SYSTEM:

- A.** Minimum size of conduit and tubing shall be 1/2". Raceways shall be supported with mechanical fastening devices (wire is not acceptable), at intervals not to exceed the requirements of the NEC. Conduits shall be fastened to sheet metal boxes and cabinets with two locknuts where required by the National Electrical Code, where insulating bushing are used and where bushing cannot be brought into firm contact with the box; otherwise a single locknut and bushing is acceptable. Bushings shall be of the insulating type where required by the National Electrical Code. Install heavy wall rigid galvanized steel conduit on all feeders exposed outdoors unless otherwise noted. Where flexible metallic conduit is required, contractor shall use "sealtite" type in damp or wet locations and green field in dry locations. Exposed conduits on the building exteriors shall be painted or coated to match the existing building colors. The maximum length of flexible metallic conduit

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to be used for connections to equipment from disconnect means shall be 72".

1.4 BOXES AND FITTINGS:

- A. Each outlet in the wiring or raceway systems shall be provided with an outlet box to suit the conditions encountered. All outlet and junction boxes, conduit fittings, covers and supports may be non-metallic or galvanized steel. Junction or pull boxes as required by field conditions shall be installed. Each outlet box shall have sufficient volume to accommodate the number of conductors. See Article #370 NEC. Note: All junction boxes shall have covers installed upon completion of the job.
- B. Close all unused knockout holes and install non-metallic or galvanized blank covers on boxes having no fixture or device.
- C. Plates and/or covers shall be provided on all switches, convenience outlets, receptacles, telephone outlets, computer outlets, and special purpose outlets. All surface outlets shall have jumbo type non-metallic ivory color non-metallic plates.

1.5 CONDUCTORS:

- A. GENERAL: All wiring shall be 98% conductivity and having 600-volt insulation level. Conductors shall be stranded copper with thermoplastic insulation unless otherwise noted. Solder less pressure connectors, properly taped and wire connectors of insulating material shall be used for all splices where practicable.
- B. SIZES: Shall not be less than indicated. Branch circuit conductors shall be not smaller than No. 12 AWG. Conductors for branch circuits of 120 volts more than 100' long from panel to load center shall be No. 10 AWG. Class 1 remote-control and signal-circuit conductors shall not be less than No. 14 AWG Class 2 low-energy remote-control and signal circuit conductors shall be not less than No. 16 AWG.
- C. INSULATION: Conductors No. 8 AWG or larger shall be Type RHW or THW. Conductors smaller than No. 8 AWG shall be Type TH, THW, or THHN except that No. 16 AWG conductors for Class 2 remote-control and signal circuits may be commercial fixture wire, Type RF-2 or TF. Conductors of all sizes for temperatures in excess of 75 degrees centigrade shall be Type RHH or SA.
- D. IDENTIFICATION: Identification of branch circuits shall be of color-coding. Control circuit conductor identification shall be made of color coded insulated conductors, plastic-coated self-sticking printed markers, permanently attached stamped metal foil markers, or equivalent means as approved by the Engineer. Conductor identification shall be provided within each enclosure where at tap, splice, or termination is made. Control circuit terminals of equipment shall be properly identified. Terminal and conductor identification shall match that shown on approved shop drawings. Hand

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lettering or marking is not acceptable.

F. IDENTIFICATION CONTINUED

1. All branch circuit and feeder wiring shall be color-coded by insulation covering or colored tape as follows:

120/240-Volts, 3-Wire, 1-Phase (Building Service and Main Feeders)

Phase A-Black

Phase B-Red

Neutral-White

Ground-Green

2. Switch legs - pink with traces of base phase color or other marking as approved by Engineer.
 3. Travelers for 3-way Switching - Solid violet or other color as approved by the Engineer.
 4. All Conductors - No. 6 and larger may have solid black insulation with use identified by banding with tape at all terminations and access points for not less than 2" along cable. Tape shall be same colors as before described.
 5. The Phases A, B, Neutral and Ground shall be established and marked at all switch boards, transfer switches, motor control centers, panel boards, etc., as follows: Front to rear; top to bottom; or left to right when facing the equipment wiring access area.
- E. GROUNDING: All equipment, raceways, service neutrals, etc., shall be grounded. Service conduits and conduits entering and leaving service switches shall be grounded with grounding type bushings complete with lugs. Bond each bushing by means of copper connections to neutral conductor and bar or lug. Ground rods shall be 5/8" X 10' - 0" copper clad sectional, extendable solid rods. They shall be installed with top 12" below finished grade. Resistance to ground shall not exceed 25 ohms. Multiple sections may be required to meet this resistance. Provide a separate equipment-grounding conductor in each branch circuit. Equipment grounding conductor shall have a green colored insulation and shall be sized in accordance with Table 250-95 of the NEC. The grounding electrode conductor shall be sized in accordance with Table 250-94 of the NEC.
- F. INSTALLATION: An approved lubricant non-injurious to the conductor insulation shall be used where necessary for pulling conductors into raceways.

1.6 DEVICES:

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- A. Furnish and install all wiring devices as indicated on the Drawings and as required for a complete electrical system.
- B. **WALL SWITCHES:** Switches shall be of specification grade, totally enclosed tumbler type with bodies constructed of phonetic compound. Wiring terminals shall be of screw or solder less pressure type having a suitable conductor-release arrangement. Switches shall be rated 20 amps, 125-277 volts, for use on alternating current only unless otherwise indicated.
- C. **RECEPTACLES:** All duplex receptacles shall be provided with third grounded pole and shall be of specification grade. Receptacles shall be capable of receiving a two-wire parallel-bladed cap or three-pole cap. The third pole shall be connected to the metal mounting yoke. Receptacles shall be rated 20 amperes, 125 volts. Special purpose and hospital grade receptacles shall be located as indicated on drawings. Each shall be of top specification grade, of proper NEMA configuration for equipment, served, and equipped with proper cap completely installed.
 - B. **DEVICE PLATES:** Plates shall be provided for all outlets and fittings to suit the devices installed. Plates will be high-impact smooth nylon type, jumbo in size, ivory in color and red for hospital grade receptacles. Screws shall be of metal with counter-sunk heads. Plates shall be installed with all four edges in continuous contact with finished wall surfaces without the use of mats or similar devices. Plaster fillings will not be permitted. Plates shall be installed with an alignment tolerance of 1/16". The use of section-type device plates will not be permitted. Plates installed in wet locations shall be gasket. Plates used on exterior boxes shall be cast metal having round or beveled edges.

1.7 DEVICE LOCATIONS:

- A. **OUTLET LOCATION:** The approximate location of all outlets is indicated on the Drawings as diagrammatic only. The Engineer shall determine the exact location of all outlets and outlets may be moved before rough-in to a distance of 10 feet from the position indicated without extra charge by the Contractor. Unless otherwise shown or directed, the outlet boxes shall be located with centerlines at elevations above the finished floor line or below ceiling lines as follows.
 - 1. General Lighting Switches - 48"
 - 2. Wall and Convenience Outlets - 18" from floor and 36-42" in desk areas
 - 3. Safety Switches (Max. to Handle) - 72"
 - 4. Panel boards (Max. to Top Breaker/Switch) - 72"

1.8 EQUIPMENT SUPPORTS:

- A. The Contractor shall furnish and install all necessary supports for properly mounting all electrical equipment and raceways. Such supports shall be fabricated and installed

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in a neat and workmanlike manner, and care shall be taken so that at no time shall any portion of the building structure be overloaded nor weakened in any manner. All structural steel furnished shall be standard shapes and sizes and shall be free from rust and/or scale and shall have one shop coat of unleaded oil paint thereon when delivered to the job site. All interior steel shall be firmly and rigidly welded or bolted in place. The Contractor may use prefabricated structural systems manufactured by Kindrof Company, Unistrut Products Company, or Powerstrut, Inc., for the support of raceways and/or equipment. The Contractor shall be fully responsible for the proper sizing and assembling of such systems, if used to adequately and rigidly support raceways and/or equipment mounted thereon.

- B. It shall be the responsibility of the Contractor to select bolts of adequate strength for the service required. Lock washers shall be installed under all nuts, which bear on metal. Fastenings for securing conduit runs, boxes, light apparatus, etc., shall be bolts, beam clamps, or velocity driven studs on steel work; lag bolts with expansion shields, velocity driven studs, or inserts on concrete; toggle bolts on hollow tile or concrete block. Holes for lead expansion shields shall be drilled in solid brick or concrete and, where necessary, holes around it shall be neatly cemented after bolts are in place.

1.9 MOTOR CONNECTIONS:

- A. All motors shall be connected to the conduit system by means of a short section (18" minimum) of flexible conduit unless otherwise noted. For motor connections, the Contractor shall furnish and install the grounding conductor inside the flexible section. Terminate the ground conductor by means of a solder less lug and a bolt through a hole to be drilled in the sidewall of the conduit. Risers from feeders on ceiling to individual motors on/or close to floor shall be firmly fastened at lower end and controls or protective apparatus shall be as shown on Plans. If not shown on Plans, conductor shall be as recommended by the manufacturer of the apparatus or as required by the NEC.
- B. Provide permanent engraved plastic nameplates, white letters on black field, permanently attached to equipment as follows:

1. Light Panels	Name of Panel
2. Power Panels	Name of Panels
Each Branch	Name of Load
3. Safety Switch	Name of Load
4. Transfer Switches	Building Number
5. Special Purpose Outlets	Position Breaker in Panel board
- C. Provide a complete typewritten directory under transparent plastic cover inside of each panel door.

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- D. Provide cover plate with resetting instructions on each thermal trip switch.**
- E. Leave all electrical equipment, including fixtures, free of dust, plaster, paint spots, etc.**

1.10 INSPECTION AND TESTS:

- A. The complete job will be, during and/or after construction, subject to supervision of the Engineer. The Engineer or his designated representative as necessary to maintain compliance with the contract requirements shall conduct inspections.**
- B. Prior to acceptance by the Owner/Engineer, the Contractor shall conduct and record insulation tests of all feeder and motor branch circuits. The insulation testing shall be accomplished utilizing a meg-ohm meter and complying with minimum requirements of the NEC. The Engineer or his designated representative shall witness verification of test results.**

PART 2 – PRODUCTS (N.A.)

PART 3 – EXECUTION (N.A.)

END OF SECTION

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SECTION 26 05 21 ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.01 DESCRIPTION:

Electrical conductors, cables and related items required to complete the work shall be provided as indicated on the Drawings and as described in the Specifications.

1.02 SUBMITTALS:

- A. Submit all required conductor data in accordance with the Submittals.**
- B. Submittals shall include, but not be limited to, the following:**
 - 1. Conductor types and insulation.**
 - 2. Manufacturer.**
 - 3. Specification-Data Sheets.**
- C. All branch circuit and feeder wiring shall be color-coded by insulation covering as follows:**
 - 1. Service Voltage and Feeders – 277/480-V, 4-W, 3-Phase**
 - Phase A – Black**
 - Phase B – Red**
 - Phase C – Blue**
 - Neutral – White**
 - Equipment Ground - Green**
 - 2. Building Basic Circuits – 120/240-V, 3-W, 1-Phase**
 - Phase A - Black**
 - Phase B - Red**
 - Three-way and four-way travelers - Yellow**
 - Neutral - White**
 - Equipment Ground - Green**

PART 2 - PRODUCTS

2.01 INSULATED CONDUCTORS (600 Volts):

- A. Sizes shall be not less than indicated. Branch circuit conductors shall be not smaller than No. 12 AWG. Conductors for branch circuits of 120 volts more than 100' long from panel to load center, shall be No. 10 AWG. Class 1 remote-control and**

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signal-circuit conductors shall be not less than No. 14 AWG Class 2 low-energy remote-control and signal circuit conductors shall be not less than No. 16 AWG. All conductors to be stranded annealed copper rated 600 volts.

- B. Insulation shall be type THW, THWN, THHN, or XHHN. Do not mix insulation types in the same raceway or on the same circuit. Insulation shall be of a solid color for color-coding as specified hereinafter on conductors # 10 and smaller. On #8 and larger, all conductor insulations shall be solid black, color identified with color banding at each outlet, junction and pull box. Type MC multiple conductor with ground may be used for all branch circuits and HVAC equipment feeder circuits.

2.02 CONNECTIONS (600 Volts):

- A. Pigtail splices will be permitted only on conductors #10 AWG and smaller and shall be made with a crimp cap, equal to Buchanan, applied with a crimping tool or "Scotchlok" crimp connectors or equal. Twist type wire nuts are not permitted.
- B. Straight splices #8 and larger shall be made with pressure tool applied compression type splices.
- C. Lugs shall be crimp-type equal to "Burndy". A hydraulic crimping tool will be used for crimp connections and all sizes #4 AWG and larger.
- D. Split bolt connectors will not be permitted.
- E. All splices and taps shall be insulated with at least three layers of half-lapped Scotch #88 electrical tape or equal.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Only approved commercially available wire pulling compounds shall be utilized for lubricants when installing conductors in raceways. Such lubricants are a requirement of these specifications when installing conductors #2 and larger.
- B. Wire shall be pulled into raceways from pay-out reels or reels on which the wire was shipped. Wire furnished in coils in boxes shall be removed from the boxes and placed on reels. Wire shall not be fed from the interior of the coil through the holes cut in the side of the boxes.

END OF SECTION

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SECTION 26 05 26 GROUNDING AND BONDING

PART 1 - GENERAL

1.1 GENERAL.

Contractor must ground and bond all equipment, systems, structures, etc., per the latest edition of the National Electrical Code (NEC).

PART 2 - PRODUCTS

- 2.1 Use mechanical bolted connections in dry locations that are accessible.
- 2.2 Use exothermic welds in wet locations and locations that will be inaccessible at the end of construction.
- 2.3 Ground rods shall be UL listed 5/8" x 10' copper-clad steel ground rods with a minimum copper cladding thickness of 10 mils.

PART 3 - EXECUTION

- 3.1 Ground rods shall be installed with their tops no less than 6" below grade.
- 3.2 Bond ground connections to metal raceways at each end of the conduit run. Provide grounding bushings where required by the NEC. Where cable trays are used, bond the ground conductor to each section and fitting of the tray.
- 3.3 Provide all circuits with an equipment grounding conductor sized per the NEC, or as shown on the drawings. Circuitry shown on drawings does not include the required equipment grounding conductor. Where multiple circuits are run with a common neutral, only one equipment grounding conductor is needed. The equipment grounding conductor shall be furnished with green insulation for conductors #8 AWG and smaller; where larger than #8, the equipment grounding conductor shall be taped green for its entire exposed length.
- 3.4 The grounding electrode conductor(s) shall be bare or shall be colored green for its entire exposed length.
- 3.5 Individual ground conductors shall be installed in PVC conduit sized per the NEC.
- 3.6 Provide receptacles, luminaires, and other devices with a green conductor that bonds the receptacle grounding screw or pigtail, the outlet box grounding screw, and the equipment grounding conductor together.

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3.7 Telephone, and other auxiliary systems shall be bonded to the electrical building service ground using a conductor no smaller than #6 AWG.

END OF SECTION

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SECTION 26 05 33 RACEWAYS AND BOXES

PART 1 - GENERAL

1.1 DESCRIPTION:

- A. Raceways indicated on Drawings and specified herein shall be complete in all respects including all necessary and incidental fittings, hangers and appurtenances required for a complete installation.**
- B. Minimum size of raceways shall be 1/2".**

PART 2 - PRODUCTS

2.1 RIGID CONDUIT:

- A. Hot-dipped galvanized rigid steel conduit (GRC) in all sizes may be used throughout project without regard to location or application. Any portion of a raceway using galvanized rigid conduit shall not be joined with IMC, EMT, or PVC. Refer to Article 346 NEC for further restrictions.**
- B. Conduit shall be galvanized on interior and where embedded in concrete or earth apply two coats asphaltum.**

2.2 INTERMEDIATE METALLIC CONDUIT:

- A. Intermediate metallic conduit (IMC) in all sizes may be used throughout project without regard to location or application, except that IMC shall not be used below grade, and shall not be cast in concrete. Refer to Article 345 NEC for further restrictions.**
- B. Electrical metallic tubing (EMT) may be used in all indoor applications in dry locations and shall not be embedded in concrete, earth or run exposed in wet locations.**

2.3 RIGID NON-METALLIC CONDUIT

- 2. Rigid non-metallic conduit, Schedule 40 or 80 PVC, shall be permitted below grade as allowed by the NEC. Galvanized conduit (GRC) shall be used to penetrate finished grade or concrete slab. All exterior exposed conduit shall be GRC or Schedule 80 PVC (exposed on building or at power source).**

2.4 FLEXIBLE METALLIC CONDUIT:

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- A. In damp or wet locations, flexible metallic conduit shall be of the "sealtite" type and shall be UL approved installed with proper connectors to fit the condition encountered.**
- B. In dry locations, flexible galvanized conduit (greenfield) shall be installed. Do not use "BX" in any location.**
- C. Flexible conduit lengths shall not exceed 60 inches for motor connections and/or recessed lighting unless otherwise specified.**

PART 3 - EXECUTION

3.1 LAYOUT:

- A. Plans are diagrammatic and judgment shall be exercised to install electrical work in a practical manner to function properly and to fit building construction and finish. Items not shown or specified which are required to produce a complete, operative and finished system shall be provided.**
- B. Cooperate with others in laying out work so that this phase of the work will properly fit the building and other Contractors requirements. Exact location of various outlets shall be determined from dimensions on general construction drawings or as may be determined on the job. Do not scale drawings for exact location of any outlet. Locations and characteristics of equipment furnished under other sections of the contract shall be determined from other Contractor's shop drawings or layouts prior to locating outlets.**
- C. The right is reserved to change the location of any outlet improperly installed to fit equipment or finish and to change the exact location of any outlet before initial installation. Unless otherwise shown or directed, the outlet boxes shall be located with centerlines at elevations above finish floor lines or below ceiling lines as scheduled.**
- D. Raceways exposed to view will be run perpendicular or paralleled to the planes of the building structure. Where concealed in or below grade construction, raceways will take the most direct route between exit points. Where concealed above finished ceilings and in attic voids conduits may take the most direct route between points of connection. Raceways exposed on the building exterior shall be painted to match the exterior color.**

3.2 INSTALLATION:

- A. Where several conduits are run together, they shall be neatly paralleled with concentric and true radii. All bends shall be true and even without kinks or flats. Seal**

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the exposed ends of conduits during construction to prevent the entry of foreign materials. Clean and dry all conduits before installing conductors.

- B. All empty conduits shall have a nylon pull cord (not nylon jet line) installed. This pull cord shall be free from knots and splices from box to box. Provide labeled tags on the pull cord to identify the location of each end.
- C. Raceway systems shall be concealed in new construction wherever practical, and in all instances in above ceiling.
- D. Conduits shall terminate with bushings of solid insulating plastic material utilizing two lock nuts where lock nuts are permitted. Where lock nuts are not permitted, conduit shall terminate with threaded hub connections equal to "Scru-tite". If it is not possible to install two lock nuts, then OZ Type B or equal insulated bushings shall be utilized with one lock nut.
- E. EMT crimp type connectors shall be installed with two opposing operations of the crimping tool to assure electrical continuity.
- F. Where conduits are stubbed up from the floor or slab and are not mechanically bonded to the terminal enclosure, then OZ type BL or equal insulated grounded bushings shall be utilized and grounded as specified hereinafter. Threads on steel conduit shall be protected with approved corrosion resistant conductive compound.
- G. At all connections to equipment, unions, or flanges shall be utilized to facilitate maintenance, repair, or replacement. Flexible connection shall be utilized as specified hereinafter.
- H. Where raceway systems join equipment of dissimilar metals, they shall be made with fittings specially approved for the application.
- I. Conduits installed in earth shall be buried a minimum of 24" to top below grade.

3.3 FLEXIBLE CONDUIT INSTALLATION:

- A. Flexible conduit shall be used for all equipment connections where the equipment is on a sliding or adjustable base or where mounted on vibration isolators.
- B. When flexible connections are utilized separate grounding conductors shall be installed within the raceway or a separate bonding conductor shall be external in accordance with Article 250 NEC - Grounding.
- C. Use not to exceed five (5) feet of flexible metal conduit for connections to motors and/or recessed light fixtures unless otherwise specified herein.

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- D. Flexible connections subject to moisture under normal conditions or where specifically indicated or noted shall be liquid tight with proper liquid tight fittings.**

END OF SECTION

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SECTION 26 05 41

ELECTRICAL SERVICE AND CONSTRUCTION

1.1 GENERAL:

- A. The existing overhead or underground electric service to each building type shall be remain in service but will require modifications and extensions to the emergency power equipment. Contractor shall coordinate power interruptions, installation, routing and connections to existing overhead or underground power source with the Owner (CSJFTC DPW), the local retail electrical supplier.**
- B. The Contractor shall obtain a DIGG PERMIT from CSJFTC DPW Work Orders for the scheduled and marking locations of all existing underground utilities in the area of construction before any new underground construction is performed. Damage and repairs to any existing underground utilities shall be the responsibility of the Contractor.**

1.2 VOLTAGE:

- A. The service voltages shall be 120/240-V, 3-W, 1-Phase for each building type.**

1.3 GROUNDING:

- A. Ground the electrical service in accordance with Article 250 of the National Electrical Code. Ground each panel individually or provide ground wire with feeder from Main Panel.**

1.4 COORDINATION WITH OWNER/ENGINEER:

- A. Contractor shall provide to Owner and Engineer a calendar schedule of work to be performed. This schedule shall be provided after investigation of scheduling and needs, equipment delivery dates and work of other trades.**

END OF SECTION

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SECTION 26 24 16 POWER DISTRIBUTION PANELBOARD EQUIPMENT

PART I - GENERAL

1.1 SUMMARY:

- A. Main Panelboard and Distribution Sub-panels shall be constructed as integral parts of the Motor Control Center equipment enclosure.**
- B. All panelboard, distribution panels, circuit breakers and associated devices shall comply with applicable NEMA and IEEE published standards.**

Part 2 - PRODUCTS

2.2 SAFETY SWITCHES (277/480-V):

- A. Safety switches shall be furnished and installed in accordance with the following requirements:**
 - 1. Type HD as defined by NEMA and shall be of voltage rating as required.**
 - 2. Horsepower rated in accordance with "fusetron" fuses on motor circuits.**
 - 3. Enclosures: NEMA-3R outdoors, NEMA-1 indoors.**
 - 4. Safety Switches shall be Square D, ITE, General Electric or of the same manufacturer as major power distribution components.**
 - 5. All fused switches shall be fused with Bussman Fusetron dual element type fuses as appropriate to the circuit voltage with size fuse appropriate for motor load.**

2.2 STARTER, CONTROLS, AND DISCONNECTS:

- A. All disconnect switches shall be standard type HP rated, sized to the load and fused so as to provide running over current protection. All fuses shall be dual-element fusetron or equal. Use NEMA type 3R switches for all outside installations.**
- B. Supply all motor controls and starters unless furnished with the equipment. Furnish additional interlocks for the starters as required to proper connect the starter as called for in the control wiring diagrams.**
- C. Push buttons, limit switches, and other control devices generally will be furnished by installing trade unless specifically called for in this section of the specifications.**
- D. Starters for all motors shall be furnished with three overload devices, one for each ungrounded leg.**

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Part 3 – EXECUTION

3.1 MOTORS:

- A. Motors shall be furnished by the trade supplying the motor driven equipment. Review the requirements of other sections of these specifications to determine electrical requirements to be provided under this section. Generally, motors will be installed by supplying trade and the necessary electrical power supply connections will be a part of the requirements of this Division.**
- B. Furnish and install all power wiring required for the entire project as a part of this Division. Control wiring is herein defined to embrace temperature control, interlock sequencing, and initiating controls, and other controls as may be required. Refer to other sections of these specifications and the drawings to determine the extent of such other wiring as may be required.**

END OF SECTION

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SECTION 26 32 14 NATURAL GAS GENERATOR SETS AND SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.**

1.2 SUMMARY

- A. This Section includes packaged engine-generator sets suitable for use in applications with the features as specified and indicated where the engine generators will be used as the Standby power source for the system.**
- B. This section also includes as Parts 5 and 6 the specifications for the Automatic Transfer Switch.**

1.3 DEFINITIONS

- A. Emergency Standby Power (ESP): Per ISO 8528: The maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 hours of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output (Ppp) over 24 hours of operation shall not exceed 70 percent of the ESP unless otherwise agreed by the RIC engine manufacturer.**
- B. Operational Bandwidth: The total variation from the lowest to highest value of a parameter over the range of conditions indicated, expressed as a percentage of the nominal value of the parameter.**

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of packaged engine generator indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories. In addition, include the following:**
 - 1. Thermal damage curve for generator.**
 - 2. Time-current characteristic curves for generator protective device.**

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3. Sound test data, based on a free field requirement.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, and location and size of each field connection.
 1. Dimensioned outline plan and elevation drawings of engine-generator set and other components specified.
 2. Wiring Diagrams: Control interconnection, Customer connections.
- C. Certifications:
 1. Submit statement of compliance which states the proposed product(s) is certified to the emissions standards required by the location for EPA, stationary emergency application.
 2. Submit statement of compliance which states the proposed product(s) are seismically certified in compliance with local requirements signed and sealed by a qualified professional engineer.

1.5 INFORMATIONAL SUBMITTALS

- A. Manufacturer Seismic Qualification Certification: Submit certification that the engine-generator set and components will withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems." Include the following:
 1. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 2. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- B. Source quality-control test reports.
 1. Certified summary of prototype-unit test report. See requirements in Part 2 "Source Quality Control" Article Part A. Include statement indicating torsional compatibility of components.
 2. Certified Test Report: Provide certified test report documenting factory test per the requirements of this specification, as well as certified factory test of generator set sensors per NFPA110 level 1.

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3. Report of exhaust emissions and compliance statement certifying compliance with applicable regulations.

1.6 QUALITY ASSURANCE

- A. **Installer Qualifications:** Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. **Manufacturer Qualifications:** A qualified manufacturer. Maintain, within 100 miles of Project site, a service center capable of providing training, parts, and emergency maintenance repairs.
- C. **Source Limitations:** Obtain packaged generator sets and auxiliary components through one source from a single manufacturer who manufactures the engine, alternator and controls.
- D. **Comply with NFPA 37 (Standard For the Installation and Use of Stationary Combustion Engines and Gas Turbines).**
- E. **Comply with NFPA 70 (National Electrical Code. Equipment shall be suitable for use in systems in compliance to Article 700, 701, and 702).**
- F. **Comply with NFPA 110 (Emergency and Standby Power Systems) requirements for Level 1 emergency power supply system.**
- G. **Current Model shall be listed with UL to UL2200.**
- H. **The nonstructural products (mechanical and/or electrical components) described in this spec shall be CERTIFIED FOR SEISMIC APPLICATIONS in accordance with the following building code releases, IBC 2112 and 2015.**
- I. **The Standby Emergency Generator manufacturer shall be certified to ISO 9001 International Quality Standard and shall have third party certification verifying quality assurance in design/development, production, installation, and service, in accordance with ISO 9001.**

1.7 WARRANTY

- A. **Base Warranty:** Manufacturer shall provide base warranty coverage on the material and workmanship of the generator set for a minimum of twenty-four (24) months for Standby product and twelve (12) months for Prime/Continuous product from registered commissioning and start-up.

PART 2 - PRODUCTS

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2.1 MANUFACTURERS

- A. Manufacturers:** The Emergency Power System for this specification is Cummins Power Generation equipment, CAT or Kohler than meet this specification shall be considered equal.

2.2 ENGINE-GENERATOR SET

- A. Factory-assembled and -tested, engine-generator set.**
- B. Mounting Frame:** Maintain alignment of mounted components without depending on concrete foundation; and have lifting attachments.
 - 1. Rigging Information:** Indicate location of each lifting attachment, generator-set center of gravity, and total package weight in submittal drawings.
- C. Capacities and Characteristics:**
 - 1. Power Output Ratings:** Electrical output power rating for Standby operation of not less than 200kW, at unity power factor, 277/480V, three phase, 60 hertz. Each package shall include (1) one thermal magnetic 300A circuit breaker mounted on the generator.
- D. Generator-Set Performance:**
 - 1. Steady-State Voltage Operational Bandwidth:** 1.0 percent of rated output voltage from no load to full load.
 - 2. Transient Voltage Performance:** Not more than 20 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within 5 seconds. On application of a 100% load step the generator set shall recover to stable voltage within 10 seconds.
 - 3. Steady-State Frequency Operational Bandwidth:** 0.5 percent of rated frequency from no load to full load.
 - 4. Steady-State Frequency Stability:** When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
 - 5. Transient Frequency Performance:** Not more than 15 percent variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within 5 seconds. On application of a

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100% load step the generator set shall recover to stable frequency within 10 seconds.

6. **Output Waveform:** At full load, harmonic content measured line to line or line to neutral shall not exceed 5 percent total and 3 percent for any single harmonic. Telephone influence factor, determined according to NEMA MG 1, shall not exceed 50.
7. **Sustained Short-Circuit Current:** (For engine-generator sets using a PMG-excited alternator) For a 3-phase, bolted short circuit at system output terminals, system shall supply a minimum of 300 percent of rated full-load current for not less than 8 seconds without damage to generator system components. For a 1-phase, bolted short circuit at system output terminals, system shall regulate both voltage and current to prevent over-voltage conditions on the non-faulted phases.
8. **Start Time:** Comply with NFPA 110, Level 1, Type 10, system requirements.
9. **Ambient Condition Performance:** Engine generator shall be designed to allow operation at full rated load in an ambient temperature under site conditions, based on highest ambient condition. Ambient temperature shall be as measured at the air inlet to the engine generator for enclosed units, and at the control of the engine generator for machines installed in equipment rooms.

2.3 ENGINE

- A. **Fuel:** Natural Gas
- B. **Rated Engine Speed:** 1800RPM.
- C. **Lubrication System:** The following items are mounted on engine or skid:
 1. **Lube oil pump:** shall be positive displacement, mechanical, full pressure pump.
 2. **Filter and Strainer:** Provided by the mechanical contractor of record to provide adequate filtration for the prime mover to be used.
 3. **Crankcase Drain:** Arranged for complete gravity drainage to an easily removable container with no disassembly and without use of pumps, siphons, special tools, or appliances.
- D. **Engine Fuel System:** The engine fuel system shall be installed in strict compliance to the engine manufacturer's instructions. A fuel pressure test port

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shall be installed downstream of regulators for setting pressure to generator. Test with a temporary gauge to be removed after initial installation.

- E. **Coolant Jacket Heater:** Electric-immersion type, factory installed in coolant jacket system. Comply with NFPA 110 requirements for Level 1 equipment for heater capacity and performance.
 - 1. Designed for operation on a single 120 VAC, Single phase, 60Hz power connection. Heater voltage shall be shown on the project drawings.
 - 2. Installed with isolation valves to isolate the heater for replacement of the element without draining the engine cooling system or significant coolant loss.
 - 3. Provided with a 12VDC thermostat, installed at the engine thermostat housing
- F. **Governor:** Adjustable isochronous, with speed sensing. The governing system dynamic capabilities shall be controlled as a function of engine coolant temperature to provide fast, stable operation at varying engine operating temperature conditions. The control system shall actively control the fuel rate as appropriate to the state of the engine generator. Fuel rate shall be regulated as a function of starting, accelerating to start disconnect speed, accelerating to rated speed, and operating in various isochronous states.
- G. **Cooling System:** Closed loop, liquid cooled
 - 1. The generator set manufacturer shall provide prototype test data for the specific hardware proposed demonstrating that the machine will operate at rated standby load in an outdoor ambient condition of 40 deg C.
 - 2. Coolant: Solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer.
 - 3. Size of Radiator overflow tank: Adequate to contain expansion of total system coolant from cold start to 110 percent load condition.
 - 4. Expansion Tank: Constructed of welded steel plate and rated to withstand maximum closed-loop coolant system pressure for engine used. Equip with gage glass and petcock.
 - 5. Temperature Control: Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.

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- H. **Muffler/Silencer:** Selected with performance as required to meet sound requirements of the application, sized as recommended by engine manufacturer and selected with exhaust piping system to not exceed engine manufacturer's engine backpressure requirements. For generator sets with outdoor enclosures the silencer shall be inside the enclosure.
- I. **Air-Intake Filter:** Engine-mounted air cleaner with replaceable dry-filter element and restriction indicator.
- J. **Starting System:** 12V, as recommended by the engine manufacturer; electric, with negative ground.
 - 1. **Components:** Sized so they will not be damaged during a full engine-cranking cycle with ambient temperature at maximum specified in Part 1 "Project Conditions" Article.
 - 2. **Cranking Cycle:** As required by NFPA 110 for level 1 systems.
 - 3. **Battery Cable:** Size as recommended by engine manufacturer for cable length as required. Include required interconnecting conductors and connection accessories.
 - 4. **Battery Compartment:** Factory fabricated of metal with acid-resistant finish.
 - 5. **Battery-Charging Alternator:** Factory mounted on engine with solid-state voltage regulation. The battery charging alternator shall have sufficient capacity to recharge the batteries with all parasitic loads connected within 4 hours after a normal engine starting sequence.
 - 6. **Battery Chargers:** Unit shall comply with UL 1236, provide fully regulated, constant voltage, current limited, minimum 6A battery charger for each battery bank. It will include the following features:
 - a. **Operation:** Equalizing-charging rate based on generator set manufacturer's recommendations shall be initiated automatically after battery has lost charge until an adjustable equalizing voltage is achieved at battery terminals. Unit shall then be automatically switched to a lower float-charging mode and shall continue to operate in that mode until battery is discharged again.
 - b. **Automatic Temperature Compensation:** Adjust float and equalize voltages for variations in ambient temperature from minus 20 deg C to

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plus 40 deg C to prevent overcharging at high temperatures and undercharging at low temperatures.

- c. **Automatic Voltage Regulation:** Maintain constant output voltage regardless of input voltage variations up to plus or minus 10 percent.
 - d. **Safety Functions:** Sense abnormally low battery voltage and close contacts providing low battery voltage indication on control and monitoring panel. Sense high battery voltage and loss of ac input or dc output of battery charger. Either condition shall close contacts that provide a battery-charger malfunction indication at system control and monitoring panel.
 - e. Provide LED indication of general charger condition, including charging, faults, and modes. Provide a LCD display to indicate charge rate and battery voltage. Charger shall provide relay contacts for fault conditions as required by NFPA110.
 - f. **Enclosure and Mounting:** NEMA, Type 1, wall-mounted cabinet.
- K. **Battery Charger and Block Heater** shall be wired for a single point of connection for customer power at the factory.
- L. **Outdoor Weather-Protective Enclosure**
- 1. The generator set shall be provided with an Aluminum outdoor enclosure, with the entire package listed under UL2200. The package shall comply with the requirements of the National Electrical Code for all wiring materials and component spacing. The total assembly of generator set, enclosure, shall be designed to be lifted into place using spreader bars. Housing shall provide ample airflow for generator set operation at rated load in an ambient temperature of 100F. The housing shall have hinged access doors as required to maintain easy access for all operating and service functions. All doors shall be lockable, and include retainers to hold the door open during service. Enclosure roof shall be cambered to prevent rainwater accumulation. Openings shall be screened to limit access of rodents into the enclosure. All electrical power and control interconnections shall be made within the perimeter of the enclosure.
 - 2. All sheet metal shall be primed for corrosion protection and finish coating with the manufacturer's standard color using a two-step electrocoating paint process, or equal meeting the performance requirements specified below. All surfaces of all metal parts shall be primed and painted. The painting process shall result in a coating that meets the following requirements:
 - a. **Primer thickness, 0.5-2.0 mils. Top coat thickness, 0.8-1.2 mils.**

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- b. Gloss, per ASTM D523-89, 80% plus or minus 5%. Gloss retention after one year shall exceed 50%.
 - c. Crosshatch adhesion, per ASTM D3359-93, 4B-5B.
 - d. Impact resistance, per ASTM D2794-93, 120-160 inch-pounds.
 - e. Salt Spray, per ASTM B117-90, 1000+ hours.
 - f. Humidity, per ASTM D2247-92, 1000+ hours.
 - g. Water Soak, per ASTM D2247-92, 1000+ hours.
 - 3. Painting of hoses, clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant, and designed to minimize marring of the painted surface when removed for normal installation or service work.
 - 4. A factory-mounted exhaust silencer shall be installed inside the enclosure. The exhaust shall exit the enclosure through a rain collar and terminate with a rain cap. Exhaust connections to the generator set shall be through seamless flexible connections.
 - 5. The enclosure shall include the following maintenance provisions:
 - a. Flexible coolant and lubricating oil drain lines, that extend to the exterior of the enclosure, with internal drain valves
 - b. External radiator fill provision.
- 2.4 CONTROL AND MONITORING**
- A. Engine generator control shall be microprocessor based and provide automatic starting, monitoring, protection and control functions for the unit.
 - B. Automatic Starting System Sequence of Operation: When mode-selector switch on the control and monitoring panel is in the automatic position, remote-control contacts in one or more separate automatic transfer switches initiate starting and stopping of generator set. When mode-selector switch is switched to the on position, generator set starts. The off position of same switch initiates generator-set shutdown. (Switches with different configurations but equal functions are acceptable.) When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of the local (generator set-mounted) and/or remote emergency-stop switch also shuts down generator set.
 - C. Manual Starting System Sequence of Operation: Switching on-off switch on the generator control panel to the on position starts generator set. The off position of same switch initiates generator-set shutdown. When generator set is

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running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of the local (generator set-mounted) and/or remote emergency-stop switch also shuts down generator set.

- D. Configuration: Operating and safety indications, protective devices, system controls, engine gages and associated equipment shall be grouped in a common control and monitoring panel. Mounting method shall isolate the control panel from generator-set vibration. AC output power circuit breakers and other output power equipment shall not be mounted in the control enclosure.
- E. Indicating and Protective Devices and Controls: As required by NFPA 110 for Level 1 system, and the following:
1. AC voltmeter (3-phase, line to line and line to neutral values).
 2. AC ammeter (3-phases).
 3. AC frequency meter.
 4. Fault Reset Switch: Supply a dedicated control switch to reset/clear fault conditions.
 5. DC voltmeter (alternator battery charging).
 6. Engine-coolant temperature.
 7. Engine lubricating-oil pressure.
 8. Running-time meter.
 9. AC Protective Equipment: The control system shall include over/under voltage, over current, loss of voltage reference, and over excitation shut down protection.
 10. Status LED indicating lamps to indicate remote start signal present at the control, existing alarm condition, not in auto, and generator set running.
 11. A graphical display panel with appropriate navigation devices shall be provided to view all information noted above, as well as all engine status and alarm/shutdown conditions (including those from an integrated engine emission control system). The display shall also include integrated provisions for adjustment of the gain and stability settings for the governing and voltage regulation systems.

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- 12. Panel lighting system to allow viewing and operation of the control when the generator room or enclosure is not lighted.**
- 13. DC control Power Monitoring:** The control system shall continuously monitor DC power supply to the control, and annunciate low or high voltage conditions. It shall also provide an alarm indicating imminent failure of the battery bank based on degraded voltage recover on loading (engine cranking).

2.5 GENERATOR, EXCITER, AND VOLTAGE REGULATOR

- A. Comply with NEMA MG 1.**
- B. Drive:** Generator shaft shall be directly connected to engine shaft. Exciter shall be rotated integrally with generator rotor.
- C. Electrical Insulation:** Class H
- D. Temperature Rise:** 120 degree F. environment.
- E. Construction** shall prevent mechanical, electrical, and thermal damage due to vibration, over speed up to 125 percent of rating, and heat during operation at 110 percent of rated capacity.
- F. Enclosure:** Drip-proof.
- G. Voltage Regulator:** SCR type, separate from exciter, providing performance as specified. The voltage regulation system shall be microprocessor-controlled, full wave rectified, and provide a pulse-width modulated signal to the exciter. No exceptions or deviations to these requirements will be permitted.
- H. Windings:** Two-thirds pitch stator winding and fully linked amortisseur winding.
- I. Subtransient Reactance:** 15 percent maximum, based on the rating of the engine generator set.

2.6 VIBRATION ISOLATION DEVICES

- A. Vibration Isolation:** Generators installed on grade shall be provided with elastomeric isolator pads integral to the generator, unless the engine manufacturer requires use of spring isolation.

2.7 FINISHES

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- A. Components: Powder-coated and baked over corrosion-resistant pretreatment and compatible primer. Manufacturer's standard color.**

2.8 SOURCE QUALITY CONTROL

- A. Prototype Testing: Factory test engine-generator set using same engine model, constructed of identical or equivalent components and equipped with identical or equivalent accessories.**
 - 1. Tests: Comply with NFPA 110, Level 1 Energy Converters. In addition, the equipment engine, skid, cooling system, and alternator shall have been subjected to actual prototype tests to validate the capability of the design under the abnormal conditions noted in NFPA110. Calculations and testing on similar equipment which are allowed under NFPA110 are not sufficient to meet this requirement.**
- B. Project-Specific Equipment Tests: Before shipment, factory test engine-generator set manufactured specifically for this Project. Perform tests at rated load and power factor. Include the following tests:**
 - 1. Test engine generator set manufactured for this Project to demonstrate compatibility and functionality.**
 - 2. Full load run.**
 - 3. Maximum power.**
 - 4. Voltage regulation.**
 - 5. Steady-state governing.**
 - 6. Single-step load pickup.**
 - 7. Simulated safety shutdowns.**

PART 3 - EXECUTION

3.5 INSTALLATION

- A. Comply with packaged engine-generator manufacturers' written installation, application, and alignment instructions and with NFPA 110.**
- B. Equipment shall be installed by the contractor in accordance with final submittals and contract documents. Installation shall comply with applicable state and local codes as required by the authority having jurisdiction. Install equipment**

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in accordance with manufacturer's instructions and instructions included in the listing or labeling of UL listed products.

- C. Installation of equipment shall include furnishing and installing all interconnecting wiring between all major equipment provided for the on-site power system. The contractor shall also perform interconnecting wiring between equipment sections (when required), under the supervision of the equipment supplier.
- D. Equipment shall be installed on concrete housekeeping pads. Equipment shall be permanently fastened to the pad in accordance with manufacturer's instructions and seismic requirements of the site.
- E. Equipment shall be initially started and operated by representatives of the manufacturer. All protective settings shall be adjusted as instructed by the consulting engineer.
- F. All equipment shall be physically inspected for damage. Scratches and other installation damage shall be repaired prior to final system testing. Equipment shall be thoroughly cleaned to remove all dirt and construction debris prior to initial operation and final testing of the system.
- G. On completion of the installation by the electrical contractor, the generator set supplier shall conduct a site evaluation to verify that the equipment is installed per manufacturer's recommended practice.

3.6 ON-SITE ACCEPTANCE TEST

- A. The complete installation shall be tested to verify compliance with the performance requirements of this specification following completion of all site work. Testing shall be conducted by representatives of the manufacturer, with required fuel supplied by Contractor. The Engineer shall be notified in advance and shall have the option to witness the tests. The generator set manufacturer shall provide a site test specification covering the entire system. Tests shall include:
- B. Prior to start of active testing, all field connections for wiring, power conductors, and bus bar connections shall be checked for proper tightening torque.
- C. Installation acceptance tests to be conducted on site shall include a "cold start" test, a (2) hour full load (resistive) test, with Certified Factory Test supplied, and a one-step rated load pickup test in accordance with NFPA 110. Provide a resistive load bank and make temporary connections for full load test, if necessary.

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If Certified Factory test is not supplied by the factory a (4) four hour on site reactive load bank test is required. Test pressure downstream from regulator to verify adequate pressure during normal operation.

- D. Perform a power failure test on the entire installed system. This test shall be conducted by opening the power supply from the utility service, and observing proper operation of the system for at least 2 hours. Coordinate timing and obtain approval for start of test with site personnel.**

3.7 TRAINING

- A. The equipment supplier shall provide training for the facility operating personnel covering operation and maintenance of the equipment provided. The training program shall be not less than 4 hours in duration. Training date shall be coordinated with the facility owner.**

3.8 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.**

3.9 SERVICE AND SUPPORT

- A. The generator set supplier shall maintain service parts inventory for the entire power system at a central location which is accessible to the service location 24 hours per day, 365 days per year. The inventory shall have a commercial value of \$3 million or more. The manufacturer of the generator set shall maintain a central parts inventory to support the supplier, covering all the major components of the power system, including engines, alternators, control systems, paralleling electronics, and power transfer equipment.**
- B. The generator set shall be serviced by a local service organization that is trained and factory certified in generator set service. The supplier shall maintain an inventory of critical power system replacement parts in the local service location. Service vehicles shall be stocked with critical replacement parts. The service organization shall be on call 24 hours per day, 365 days per year. The service organization shall be physically located within 100 miles of the site.**
- C. The manufacturer shall maintain model and serial number records of each generator set provided for at least 20 years.**

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AUTOMATIC TRANSFER SWITCHES

PART 4 - GENERAL

4.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.**

4.2 SUMMARY

- A. This Section includes Service Entrance Rated Automatic Transfer Switches rated 600 V and less, including the following:**
 - 1. Automatic transfer switches, Cummins Model OTECSE, 225A, 3P, 3W, 277/480V, NEMA 1, Three Phase.**
- B. If appropriate, the automatic transfer switch may be included as an integral part of the Motor Control Center enclosure. If so, then the applicable sections and requirements of this specification shall apply.**

4.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, weights, operating characteristics, furnished specialties, and accessories.**
 - 1. Technical data on all major components of all transfer switches and other products described in this section. Data is required for the transfer switch mechanism, control system, cabinet, and protective devices specifically listed for use with each transfer switch. Include steady state and fault current ratings, weights, operating characteristics, and furnished specialties and accessories.**
 - 2. Single Line Diagram: Show connections between transfer switch, power sources and load**
- B. Shop Drawings: Dimensioned plans, elevations, sections, and details showing minimum clearances, conductor entry provisions, gutter space, installed features and devices, and material lists for each switch specified.**
 - 1. Dimensioned outline drawings of assembly, including elevations, sections, and details including minimal clearances, conductor entry provisions, gutter space, installed features and devices and material lists for each switch specified.**

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2. Internal electrical wiring and control drawings.
 3. Interconnection wiring diagrams, showing recommended conduit runs and point-to-point terminal connections to generator set.
 4. Installation and mounting instructions, including information for proper installation of equipment to meet seismic requirements.
- C. Manufacturer and Supplier Qualification Data
1. The transfer switch manufacturer shall be certified to ISO 9001 International Quality Standard and shall have third party certification verifying quality assurance in design/development, production, installation, and service, in accordance with ISO 9001.
 2. The manufacturer of this equipment shall have produced similar equipment for a minimum period of 10 years. When requested, an acceptable list of installations with similar equipment shall be provided demonstrating compliance with this requirement.
- D. Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
1. Features and operating sequences, both automatic and manual.
 2. List of all factory settings of relays, timers and protective devices; provide setting and calibration instructions where applicable.
- E. Warranty documents demonstrating compliance with the project's contract requirements.

4.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: The equipment supplier shall maintain a service center capable of providing training, parts, maintenance and emergency repairs to equipment, including transfer switch generator sets and remote monitoring equipment (if applicable) at the site within a response period of less than (eight hours or appropriate time period designated for Project) from time of notification.
1. The transfer switch shall be serviced by technicians employed by, and specially trained and certified by, the generator set supplier and the supplier shall have a service organization that is factory-certified in both generator set and

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transfer switch service. The supplier shall maintain an inventory of critical replacement parts at the local service organization, and in service vehicles. The service organization shall be on call 24 hours per day, 365 days per year.

2. Submit names, experience level, training certifications, and locations for technicians that will be responsible for servicing equipment at this site.
 3. The manufacturer shall maintain model and serial number records of each transfer switch provided for at least 20 years.
- B. Source Limitations: All transfer switches are to be a product of the generator manufacture. The generator set manufacturer shall warrant transfer switches to provide a single source of responsibility for products provided.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked as suitable for use in emergency, legally required or optional standby use as appropriate for the connected load.
- D. The automatic transfer switch installation and application shall conform to the requirements of the following codes and standards:
1. Transfer switches and enclosures shall be UL 1008 listed and labeled as suitable for use in emergency, legally required, and optional standby applications.
 2. CSA 282, Emergency Electrical Power Supply for Buildings, and CSA C22.2, No. 14-M91 Industrial Control Equipment
 3. NFPA 70, National Electrical Code. Equipment shall be suitable for use in systems in compliance with Articles 700, 701 and 702.
 4. Comply with NEMA ICS 10-1993 AC Automatic Transfer Switches
 5. IEEE 446 – Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
 6. EN55011, Class B Radiated Emissions and Class B Conducted Emissions
 7. IEC 1000-4-5 (EN 61000-4-5); AC Surge Immunity
 8. IEC 1000-4-4 (EN 61000-4-4) Fast Transients Immunity
 9. IEC 1000-4-2 (EN 61000-4-2) Electrostatic Discharge Immunity

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- 10. IEC 1000-4-3 (EN 61000-4-3) Radiated Field Immunity**
 - 11. IEC 1000-4-6 Conducted Field Immunity**
 - 12. IEC 1000-4-11 Voltage Dip Immunity**
 - 13. IEEE 62.41, AC Voltage Surge Immunity**
 - 14. IEEE 62.45, AC Voltage Surge Testing**
- E. Comply with NFPA 99 – Essential Electrical Systems for Healthcare Facilities**
- F. Comply with NFPA 110 – Emergency and Standby Power Systems. The transfer switch shall meet all requirements for Level 1 systems, regardless of the actual circuit level.**
- G. The manufacturer shall warrant the material and workmanship of the transfer switch equipment for a minimum of two (2) year from the warranty start date. The warranty start date is the date of registered commissioning and start up or eighteen (18) months from date of shipment, whichever is sooner.**
- H. The warranty shall be comprehensive. No deductibles shall be allowed for travel time, service hours, repair parts cost, and etc. during the minimum noted warranty period described above.**

4.5 PROJECT CONDITIONS

- A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electrical service:**
- 1. Notify (Architect/Construction Manager/Owner) no fewer than (insert appropriate number) days in advance of proposed interruption of electrical service.**
 - 2. Do not proceed with interruption of electrical service without (Architect/Construction Manager/Owner's) written permission.**
 - 3. Do not energize any new service or distribution equipment without notification and permission of the (Architect/Construction Manager/Owner).**

4.6 COORDINATION

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- A. Size and location of concrete bases and anchor bolt inserts shall be coordinated. Concrete, reinforcement and formwork must meet the requirements specified in Division 03. See section "INSTALLATION" for additional information on installation

PART 5 - PRODUCTS

5.1 MANUFACTURERS

- A. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - 1. Cummins Power Generation, Equals in CAT or Kohler that meet this spec are approved.
- B. Equipment specifications for this Project are based on automatic transfer switches manufactured by Cummins Power Generation. Switches manufactured by other manufacturers that meet the requirement of this specification are acceptable, if approved not less than two weeks before scheduled bid date. Proposals must include a line-by-line compliance statement based on this specification.
- C. Transfer switches utilizing molded case circuit breakers do not meet the requirements of this specification and will not be accepted.

5.2 GENERAL TRANSFER-SWITCH PRODUCT REQUIREMENTS

- A. Provide transfer switches in the number and ratings that are shown on the drawings.
- B. **Indicated Current Ratings:** Apply as defined in UL 1008 for continuous loading and total system transfer.
- C. **Fault-Current Closing and Withstand Ratings:** UL 1008 WCR ratings must be specifically listed as meeting the requirements for use with protective devices at installation locations, under specified fault conditions. Withstand and closing ratings shall be based on use of the same set of contacts for the withstand test and the closing test.
- D. **Solid-State Controls:** All settings should be accurate to +/- 2% or better over an operating temperature range of - 40 to + 60 degrees C (- 40 to + 140 degrees F).
- E. **Resistance to Damage by Voltage Transients:** Components shall meet or exceed voltage-surge withstand capability requirements when tested according to

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IEEE C62.41. Components shall meet or exceed voltage-impulse withstand test of NEMA ICS 1.

- F. **Electrical Operation:** Accomplished by a non-fused, momentarily energized solenoid or electric motor operator mechanism, mechanically and electrically interlocked in both directions (except that mechanical interlock is not required for closed transition switches).
- G. **Switch Characteristics:** Designed for continuous-duty repetitive transfer of full-rated current between active power sources.
 - 1. Switches using molded-case switches or circuit breakers, or insulated case circuit breaker components are not acceptable.
 - 2. Transfer switches shall be double-throw, electrically and mechanically interlocked, and mechanically held in the Source 1 and Source 2 positions.
 - 3. Main switch contacts shall be high pressure silver alloy. Contact assemblies shall have arc chutes for positive arc extinguishing. Arc chutes shall have insulating covers to prevent inter-phase flashover.
 - 4. Contacts shall be operated by a high-speed electrical mechanism that causes contacts to open or close within three electrical cycles from signal.
 - 5. Transfer switch shall be provided with flame retardant transparent covers to allow viewing of switch contact operation but prevent direct contact with components that could be operating at line voltage levels.
 - 6. The transfer switch shall include the mechanical and control provisions necessary to allow the device to be field-configured for operating speed. Transfer switch operation with motor loads shall be as is recommended in NEMA MG1.
 - a. Phase angle monitoring/timing equipment is not an acceptable substitute for this functionality
 - 7. Transfer switches designated on the drawings as "3-pole" shall have a full current-rated neutral bar with lugs.
- H. **Factory wiring:** Transfer switch internal wiring shall be composed of pre-manufactured harnesses that are permanently marked for source and destination. Harnesses shall be connected to the control system by means of locking disconnect

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plug(s), to allow the control system to be easily disconnected and serviced without disconnecting power from the transfer switch mechanism

- I. Terminals: Terminals shall be pressure type and appropriate for all field wiring. Control wiring shall be equipped with suitable lugs, for connection to terminal strips.
- J. Enclosures: All enclosures shall be third-party certified for compliance to NEMA ICS 6 and UL 508, unless otherwise indicated:
 - 1. The enclosure shall provide wire bend space in compliance to the latest version of NFPA70, regardless of the direction from which the conduit enters the enclosure.
 - 2. Exterior cabinet doors shall provide complete protection for the system's internal components. Doors must have permanently mounted key-type latches. Bolted covers or doors are not acceptable.
 - 3. Transfer switches shall be provided in enclosures that are third party certified for their intended environment per NEMA requirements.

5.3 AUTOMATIC TRANSFER SWITCHES

- A. Comply with requirements for Level 1 equipment according to NFPA 110.
- B. Indicated current ratings:
 - 1. Refer to the Project drawings for specifications on the sizes and types of transfer switch equipment, withstand and closing ratings, number of poles, voltage and ampere ratings, enclosure type, and accessories.
 - 2. Main contacts shall be rated for 600 VAC minimum.
 - 3. Transfer switches shall be rated to carry 100% of rated current continuously in the enclosure supplied, in ambient temperatures of -40 to +60 degrees C (-40 to +140 degrees F), relative humidity up to 95% (non-condensing), and altitudes up to 10,000 feet (3000 meters).
- C. Transfer switches that are designated on the drawings as 3-pole shall be provided with a neutral bus and lugs. The neutral bus shall be sized to carry 100% of the current designated on the switch rating.
- D. Automatic Transfer Switch Control Features

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1. The transfer switch control system shall be configurable in the field for any operating voltage level up to 600 VAC. Voltage sensing shall be monitored based on the normal voltage at the site. Systems that utilize voltage monitoring based on standard voltage conditions that are not field configurable are not acceptable.
 2. All transfer switch sensing shall be configurable from an operator panel or from a Windows XP or later PC-based service tool. Designs utilizing DIP switches or other electromechanical devices are not acceptable.
 3. The transfer switch shall provide a relay contact signal prior to transfer or re-transfer. The time period before and after transfer shall be adjustable in a range of 0 to 60 seconds.
 4. The control system shall be designed, and prototype tested, for operation in ambient temperatures from - 40 degrees C to + 60 degrees C (- 40 to +140 degrees F). It shall be designed and tested to comply with the requirements of the noted voltage and RFI/EMI standards.
 5. The control shall have optically isolated logic inputs, high isolation transformers for AC inputs and relays on all outputs, to provide optimum protection from line voltage surges, RFI and EMI.
- E. Transfer Switch Control Panel: The transfer switch shall have a microprocessor-based control with a sealed membrane panel incorporating pushbuttons for operator-controlled functions, and LED lamps for system status indicators. Panel display and indicating lamps shall include permanent labels.
1. The indicator panel LEDs shall display:
 - a. Which source the load is connected to (Source 1 or Source 2)
 - b. Which source or sources are available
 - c. When switch is not set for automatic operation, the control is disabled
 - d. When the switch is in test/exercise mode
 2. The indicator shall have pushbuttons that allow the operator to activate the following functions:
 - a. Activate pre-programmed test sequence
 - b. Override programmed delays, and immediately go to the next operation

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- c. Reset the control by clearing any faults
- d. Test all of the LEDs by lighting them simultaneously

F. Control Functions: Functions managed by the control shall include:

1. Software adjustable time delays:

- a. Engine start (prevents nuisance genset starts in the event of momentary power fluctuation): 0 to 120 seconds (default 3 sec)
- b. Transfer normal to emergency (allows genset to stabilize before load is transferred): 0 to 120 seconds (default 3 sec)
- c. Re-transfer emergency to normal (allows utility to stabilize before load is transferred from genset): 0 to 30 minutes (default 3 sec)
- d. Engine cooldown: 0 to 30 minutes (default 10 min)
- e. Programmed transition: 0 to 60 seconds (default 3 sec)

2. Undervoltage sensing: three-phase normal, three-phase emergency source.

3. Over-voltage sensing: three-phase normal, three-phase emergency source.

4. Over/under frequency sensing:

- a. Pickup: +/- 5 to +/-20% of nominal frequency (default 10%)
- b. Dropout: +/-1% beyond pickup (default 1%)
- c. Dropout time delay: 0.1 to 15.0 seconds (default 5 sec)
- d. Accurate to within +/- 0.05 Hz

5. Voltage imbalance sensing:

- a. Dropout: 2 to 10% (default 4%)
- b. Pickup: 90% of dropout
- c. Time delay: 2.0 to 20 seconds (default 5 sec)

6. Phase rotation sensing:

- a. Time delay: 100 msec

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7. Loss of single-phase detection:

- a. Time delay: 100 msec

G. Control features shall include:

1. Programmable genset exerciser: A field-programmable control shall periodically start and run the generator with or without transferring the load for a preset time period, then re-transfer and shut down the generator after a preset cool-down period.
2. In event of a loss of power to the control, all control settings, real-time clock setting and the engine start-time delay setting will be retained.

H. Control Interface

1. Provide one set Form C auxiliary contacts on both sides, operated by transfer switch position, rated 10 amps 250 VAC.

I. Engine Starting Contacts

1. One isolated and normally closed pair of contacts rated 10A at 32 VDC minimum.

PART 6 - EXECUTION

6.1 INSTALLATION

- A. Design each fastener and support to carry load indicated by seismic requirements and according to seismic-restraint details. See Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- B. Identify components according to Division 26 Section "Identification for Electrical Systems."
- C. Set field-adjustable intervals and delays, relays, and engine exerciser clock.

6.2 CONNECTIONS

- A. Wiring to Remote Components: Match type and number of cables and conductors to control and communication requirements of transfer switches as recommended by manufacturer. Increase raceway sizes at no additional cost to Owner if necessary to accommodate required wiring.

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- B. Field control connections shall be made on a common terminal block that is clearly and permanently labeled.**
- C. Transfer switch shall be provided with AL/CU mechanical lugs sized to accept the full output rating of the switch. Lugs shall be suitable for the number and size of conductors shown on the drawings.**
- D. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."**
- E. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."**

6.3 SOURCE QUALITY CONTROL

- A. Prior to shipping, factory shall test and inspect components, assembled switches, and associated equipment to ensure proper operation.**
- B. Factory shall check transfer time and voltage, frequency, and time-delay settings for compliance with specified requirements.**
- C. Factory shall perform dielectric strength test complying with NEMA ICS 1.**

6.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: The supplier of the transfer switch(es) and associated equipment shall inspect, test, and adjust components, assemblies, and equipment installations, including connections, and report results in writing.**
- B. Manufacturer's representative shall perform tests and inspections and prepare test reports.**
- C. After installing equipment and after electrical circuitry has been energized, installer shall test for compliance with requirements.**
 - 1. Perform recommended installation tests as recommended in manufacturer's installation and service manuals.**
 - 2. After energizing circuits, demonstrate interlocking sequence and operational function for each switch.**
 - a. Simulate power failures of normal source to automatic transfer switches and of emergency source with normal source available.**

CROSS CREEK PUMP STATION REHAB

- b. Verify time-delay settings.**
- c. Verify that the transfer switch is accurately metering AC voltage.**
- d. Verify proper sequence and correct timing of automatic engine starting, transfer time delay, retransfer time delay on restoration of normal power, and engine cool-down and shutdown.**

6.5 DEMONSTRATION

- A. After generator set installation, the generator and transfer switch supplier shall conduct a complete operation, basic maintenance, and emergency service seminar covering generator set and transfer switch equipment.**

END OF SECTION

SECTION 16060

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This section specifies the general grounding and bonding requirements for electrical equipment and operations to provide a low impedance path for possible ground fault currents.
- B. "Grounding electrode system" refers to all electrodes required by NEC, as well as made, supplementary, and lightning protection system grounding electrodes. The terms "connect" and "bond" are used interchangeably in this specification and have the same meaning.

1.02 RELATED WORK

- A. Section 16050 – Electrical Material and Methods
- B. Section 16481 – Motor Control Center
- C. Section 16900 – Process Instrumentation and Control

1.03 SUBMITTALS

- A. Shop Drawings:
 - 1. Clearly present enough information to determine compliance with drawings and specifications.
 - 2. Include the location of system grounding electrode connections and the routing of aboveground and underground grounding electrode conductors.
- B. Test Reports: Provide certified test reports of ground resistance.
- C. Certifications: Two weeks prior to final inspection, submit four copies of the following to the Project Engineer:
 - 1. Certification that the materials and installation are in accordance with the drawings and specifications.
 - 2. Certification by the Contractor that the complete installation has been properly installed and tested.

1.04 APPLICABLE PUBLICATIONS

Publications listed below (including amendments, addenda, revisions, supplements, and errata) form a part of this specification to the extent referenced. Publications are referenced in the text by designation only.

- A. American Society for Testing and Materials (ASTM):
 - B1-07.....Standard Specification for Hard-Drawn Copper Wire
 - B3-07.....Standard Specification for Soft or Annealed Copper Wire
 - B8-04.....Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
- B. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
 - 81-1983.....IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
 - C2-07.....National Electrical Safety Code
- C. National Fire Protection Association (NFPA):
 - 70-08.....National Electrical Code (NEC)
 - 99-2005.....Health Care Facilities
- D. Underwriters Laboratories, Inc. (UL):
 - 44-05.....Thermoset-Insulated Wires and Cables
 - 83-08.....Thermoplastic-Insulated Wires and Cables
 - 467-07.....Grounding and Bonding Equipment
 - 486A-486B-03.....Wire Connectors

PART 2 – PRODUCTS

2.01 GROUNDING AND BONDING CONDUCTORS

- A. Equipment grounding conductors shall be UL 44 or UL 83 insulated stranded copper, except that sizes No. 10 AWG [6 mm²] and smaller shall be solid copper. Insulation color shall be continuous green for all equipment grounding conductors, except that wire sizes No. 4 AWG [25 mm²] and larger shall be identified per NEC.
- B. Bonding conductors shall be ASTM B8 bare stranded copper, except that sizes No. 10 AWG [6 mm²] and smaller shall be ASTM B1 solid bare copper wire.
- C. Conductor sizes shall not be less than shown on the drawings, or not less than required by the NEC, whichever is greater.
- D. Isolated Power Systems (if applicable): Type XHHW-2 insulation with a dielectric constant of 3.5 or less.

2.02 GROUND RODS

- A. Steel or copper clad steel, 0.75 in [19 mm] diameter by 10 ft. [30 M] long, conforming to UL 467.
- B. Quantity of rods shall be as required to obtain the specified ground resistance, as shown on the drawings.

2.03 CONCRETE ENCASED ELECTRODE

Concrete encased electrode shall be No. 4 AWG bare copper wire, installed per NEC.

2.04

2.05 GROUND CONNECTIONS

- A. Below Grade: Exothermic-welded type connectors.
- B. Above Grade:
 - 1. Bonding Jumpers: Compression-type connectors, using zinc-plated fasteners and external tooth lock washers.
 - 2. Connection to Building Steel: Exothermic-welded type connectors.
 - 3. Ground Bus bars: Two-hole compression type lugs, using tin-plated copper or copper alloy bolts and nuts.
 - 4. Rack and Cabinet Ground Bars: One-hole compression-type lugs, using zinc-plated or copper alloy fasteners.

2.06 EQUIPMENT RACK AND CABINET GROUND BARS

Provide solid copper ground bars designed for mounting on the framework of open or cabinet-enclosed equipment racks with minimum dimensions of 0.375 in [4 mm] thick x 0.75 in [19 mm] wide.

2.07 GROUND TERMINAL BLOCKS

At any equipment mounting location (e.g., backboards and hinged cover enclosures) where rack-type ground bars cannot be mounted, provide screw lug-type terminal blocks.

2.08 GROUNDING BUS

Pre-drilled rectangular copper bar with stand-off insulators, minimum 0.25 in [6.3 mm] thick x 4 in [100 mm] high in cross-section, length as shown on drawings, with 0.281 in [7.1 mm] holes spaced 1.125 in [28 mm] apart.

PART 3 – EXECUTION

3.01 GENERAL

- A. Ground in accordance with the NEC, as shown on drawings, and as specified herein.
- B. System Grounding:
 - 1. Secondary service neutrals: Ground at the supply side of the secondary disconnecting means and at the related transformers.
 - 2. Separately derived systems (transformers downstream from the service entrance): Ground the secondary neutral.
- C. Equipment Grounding: Metallic structures, including ductwork and building steel, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, and other conductive items in close proximity with electrical circuits, shall be bonded and grounded.

3.02 INACCESSIBLE GROUNDING CONNECTIONS

Make grounding connections, which are normally buried or otherwise inaccessible (except connections for which access for periodic testing is required), by exothermic weld.

3.03 SECONDARY VOLTAGE EQUIPMENT AND CIRCUITS

- A. Main Bonding Jumper: Bond the secondary service neutral to the ground bus in the service equipment.
- B. Metallic Piping, Building Steel, and Supplemental Electrode(s):
 - 1. Provide a grounding electrode conductor sized per NEC between the service equipment ground bus and all metallic water pipe systems, building steel, and supplemental or made electrodes. Provide jumper insulating joints in the metallic piping. All connections to electrodes shall be made with fittings that conform to UL 467.
 - 2. Provide a supplemental ground electrode and bond to the grounding electrode system.
- C. Service Disconnect (Separate Individual Enclosure): Provide a ground bar bolted to the enclosure with lugs for connecting the various grounding conductors.
- D. Switchgear, Switchboards, Panelboards, Motor Control Centers and Panelboards, Engine-Generators, and Automatic Transfer Switches:
 - 1. Connect the various feeder equipment grounding conductors to the ground bus in the enclosure with suitable pressure connectors.
 - 2. For service entrance equipment, connect the grounding electrode conductor to the ground bus.
 - 3. Provide ground bars, bolted to the housing, with sufficient lugs to terminate the equipment grounding conductors.
 - 4. Connect metallic conduits that terminate without mechanical connection to the housing, by grounding bushings and grounding conductor to the equipment ground bus.
- E. Transformers:
 - 1. Exterior: Exterior transformers supplying interior service equipment shall have the neutral grounded at the transformer secondary. Provide a grounding electrode at the transformer.
 - 2. Separately derived systems (transformers downstream from service equipment): Ground the secondary neutral at the transformer. Provide a grounding electrode conductor from the transformer to the nearest component of the grounding electrode system or to the ground bar at the service equipment.

3.04 RACEWAY

- A. Conduit Systems:
 - 1. Ground all metallic conduit systems. All metallic conduit systems shall contain an equipment grounding conductor.
 - 2. Non-metallic conduit systems, except non-metallic feeder conduits that carry a grounded conductor from exterior transformers to interior or building-mounted service entrance equipment, shall contain an equipment grounding conductor.
 - 3. Conduit that only contains a grounding conductor, and is provided for its mechanical protection, shall be bonded to that conductor at the entrance and exit from the conduit.
 - 4. Metallic conduits which terminate without mechanical connection to electrical equipment housing by means of locknut and bushings or adapters, shall be provided with grounding bushings. Connect bushings with a bare grounding conductor to the equipment ground bus.
- B. Feeders and Branch Circuits: Install equipment grounding conductors with all feeders and power and lighting branch circuits.
- C. Boxes, Cabinets, Enclosures, and Panelboards:
 - 1. Bond the equipment grounding conductor to each pullbox, junction box, outlet box, device box, cabinets, and other enclosures through which the conductor passes (except for special grounding systems for intensive care units and other critical units shown).
 - 2. Provide lugs in each box and enclosure for equipment grounding conductor termination.
- D. Wire way Systems:
 - 1. Bond the metallic structures of wireway to provide 100% electrical continuity throughout the wireway system, by connecting a No. 6 AWG [16 mm²] bonding jumper at all intermediate metallic enclosures and across all section junctions.
 - 2. Install insulated No. 6 AWG [16 mm²] bonding jumpers between the wireway system, bonded as required above, and the closest building ground at each end and approximately every 50 ft. [16 M].
 - 3. Use insulated No. 6 AWG [16 mm²] bonding jumpers to ground or bond metallic wireway at each end for all intermediate metallic enclosures and across all section junctions.
 - 4. Use insulated No. 6 AWG [16 mm²] bonding jumpers to ground cable tray to column-mounted building ground plates (pads) at each end and approximately every 49 ft. [15 M].
- E. Receptacles shall not be grounded through their mounting screws. Ground receptacles with a jumper from the receptacle green ground terminal to the device box ground screw and a jumper to the branch circuit equipment grounding conductor.
- F. Ground lighting fixtures to the equipment grounding conductor of the wiring system when the green ground is provided; otherwise, ground the fixtures through the conduit systems. Fixtures connected with flexible conduit shall

have a green ground wire included with the power wires from the fixture through the flexible conduit to the first outlet box.

- G. Fixed electrical appliances and equipment shall be provided with a ground lug for termination of the equipment grounding conductor.
- H. Raised Floors: Provide bonding of all raised floor components (if applicable).

3.05 OUTDOOR METALLIC FENCES AROUND ELECTRICAL EQUIPMENT

Fences shall be grounded with a ground rod at each fixed gate post and at each corner post. Drive ground rods until the top is 12 in [300 mm] below grade. Attach a No. 4 AWG [25 mm²] copper conductor by exothermic weld to the ground rods, and extend underground to the immediate vicinity of fence post. Lace the conductor vertically into 12 in [300 mm] of fence mesh and fasten by two approved bronze compression fittings, one to bond the wire to post and the other to bond the wire to fence. Each gate section shall be bonded to its gatepost by a 0.375 in x 1 in [3 mm x 25 mm] flexible, braided copper strap and ground post clamps. Clamps shall be of the anti-electrolysis type.

3.06 CORROSION INHIBITORS

When making ground and ground bonding connections, apply a corrosion inhibitor to all contact surfaces. Use corrosion inhibitor appropriate for protecting a connection between the metals used.

3.07 CONDUCTIVE PIPING

- A. Bond all conductive piping systems, interior and exterior, to the grounding electrode system. Bonding connections shall be made as close as practical to the equipment ground bus.
- B. In operating rooms and at intensive care and coronary care type beds, bond the gases and suction piping at the outlets directly to the room or patient ground bus.

3.08 LIGHTNING PROTECTION SYSTEM

Bond the lightning protection system to the electrical grounding electrode system.

3.09 ELECTRICAL ROOM GROUNDING

Building Earth Ground Busbars: Provide ground busbar and mounting hardware at each electrical room and connect to pigtail extensions of the building grounding ring.

3.10 EXTERIOR LIGHT POLES

Provide 20 ft. [6.1 M] of No. 4 bare copper coiled at bottom of pole base excavation prior to pour, plus additional unsplined length in and above foundation as required to reach pole ground stud.

3.11 GROUND RESISTANCE

- A. Grounding system resistance to ground of 25 ohms or less shall be considered as the minimum and a resistance of 5 ohms or less shall be the goal. Make any modifications or additions to the grounding electrode system necessary for compliance without additional cost to the Customer. Final tests shall ensure that this requirement is met.
- B. Resistance of the grounding electrode system shall be measured using a four-terminal fall-of-potential method as defined in IEEE 81. Ground resistance measurements shall be made before the electrical distribution system is energized and shall be made in normally dry conditions not fewer than 48 hours after the last rainfall. Resistance measurements of separate grounding electrode systems shall be made before the systems are bonded together below grade. The combined resistance of separate systems may be used to meet the required resistance, but the specified number of electrodes must still be provided.
- C. Services at power company interface points shall comply with the power company ground resistance requirements.
- D. Below-grade connections shall be visually inspected by the Project Engineer prior to backfilling. The Contractor shall notify the Project Engineer 24 hours before the connections are ready for inspection.

3.12 GROUND ROD INSTALLATION

- A. For outdoor installations, drive each rod vertically in the earth, until top of rod is 24 in [609 mm] below final grade.
- B. For indoor installations, leave 4 in [100 mm] of rod exposed.
- C. Where permanently concealed ground connections are required, make the connections by the exothermic process, to form solid metal joints. Make accessible ground connections with mechanical pressure-type ground connectors.
- D. Where rock prevents the driving of vertical ground rods, install angled ground rods or grounding electrodes in horizontal trenches to achieve the specified resistance.

END OF SECTION

SECTION 16481

MOTOR CONTROL CENTER SPECIFICATIONS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Provide a Motor Control Center that complies with the requirements of this Section. The Motor Control Center contains the main circuit breaker, automatic transfer switch, surge protection devices, variable frequency drives, solid state starters, feeder circuit breakers, motor controllers, distribution transformer, panelboard, and control section(s).
- B. The Contractor shall be responsible for coordinating all work covered in this section with the Owner and the project Engineer. All work shall be performed based on the standards of the National Electric Code (NEC) currently in force or by the Authority Having Jurisdiction (AHJ).

1.02 RELATED SECTIONS

- A. Section 16050 – Electrical Material and Methods
- B. Section 16060 – Grounding and Bonding
- C. Section 16900 – Process Instrumentation and Control

1.03 REFERENCES

- A. NECA (INST) – NECA Standard of Installation; National Electric Contractors Association; 1993
- B. NEMA AB 1
- C. NEMA ICS 2
- D. NEMA ICS 2.3
- E. NEMA ICS 5
- F. NEMA ICS 6
- G. NEMA PB 1
- H. NEMA PB 1.1
- I. NFPA 70

1.04 MOTOR CONTROL CENTER SPECIFICATIONS

- A. Multi Unit Motor Control Center where and as shown on the drawings and as herein specified.
- B. 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.

- C. 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 90 inches high, 20 or 30 inches wide, and a minimum of 20 inches deep. Each specified section shall have a 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 (5) in the rear of any one vertical section. Only one combination starter shall be installed in each module. In addition, top and rear plates must be screw removable. Riveted plates will not be allowed.
- D. 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. Main horizontal bus bars shall be rated 600 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 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. Ground bus shall be rated for 300 Amperes minimum.
- E. 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.

- F. 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.
- G. 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.

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 described 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 (1) year after final acceptance of the project. This warranty shall cover all material replacement, all labor, and all travel expenses.

1.05 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 ten (10) 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 Solid State Starters (SSS) with a test motor and verify the proper rotation of the motor.
 8. Calibrate/Setup all preliminary 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.
 12. Verify outputs to remote equipment.
 13. Verify the proper operation of control logic from Remote Telemetry Unit (RTU).
 14. Verify that the corresponding indicator lights on all RTUs inputs, outputs and fault detection(s) are correct.
 15. Verify proper torque on all terminals and/or lugs.
- B. Provide adequate field testing of the motor control centers and controls. 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 between MCC and remote panels.
 7. Calibrate timers/dipswitches.
 8. Calibrate level and pressure control devices.

END OF SECTION

SECTION 16900

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.

1.02 RELATED WORK

- A. Section 16050 – Electrical Material and Methods
- B. Section 16060 – Grounding and Bonding
- C. Section 16481 – Motor Control Center

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.
- 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. It is the duty of the Contractor to include this guarantee with his Bidding Documents.

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 ENGINEERING SUPERVISION

- A. 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.
- B. 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.

3.03 SPARE PARTS

A one-year supply of manufactures' recommended spare parts shall be provided. The spare parts shall be packaged for long-term storage and shall be protected against humidity and temperature. A spare parts list shall be furnished listing manufacture, device model number, part number and quantity supplied.

3.04 DELIVERY AND HANDLING

After delivery to the jobsite, the Contractor shall store the control panel off of the ground in a dry location until such time as it is mounted and supplied with electrical service. The contractor shall also insure that the pump power and control cords, as well as control floats, are protected from submergence until they are properly installed and sealed.

3.05 CONTROL PANEL STAND (when required)

Each control panel stand shall be fabricated per the detail indicated in the plans. Control panel stand legs shall be cemented into the ground a minimum of three feet (3') deep. The control panel shall be bolted at all four corners to the control panel stand with stainless steel hardware. Control panels shall be installed following manufacturer's instructions properly leveled. When installed, the bottom of the control panel shall be approximately four feet (4') above finished grade elevation.

PART 4 - CONTROL PANEL SPECIFICATIONS

4.01 GENERAL

- A. The Motor Control Center (MCC) shall be that as described in Section 16481, Part 1, 1.04.
- B. All power and control wires shall be stranded copper type MTW. All wiring shall be in covered plastic wireway.
- C. All points necessary for external connection in the controller, whether power or control, shall be wired to a terminal strip located at the top or bottom of the enclosure as directed by the engineer. The terminal strip shall be permanently marked with the same designation as the wire connected to it.
- D. All power and control wires shall be marked at both ends using self-adhering wire markers. No two wires having different functions within the control panel shall have the same markings.
- E. All circuit breakers, starters, and other control devices mounted within the controller panel shall be labeled for identification both within the panel and on the wiring schematic with corresponding designations.
- F. Control power shall be 120 volts and shall be protected by a correctly sized circuit breaker. If required, provide a properly sized control power transformer with primary over current protection.
- G. Each starter shall be provided with overload protection in all three phases and

each individual starter shall have phase failure protection.

- H. All selector switches, pilot lights and control devices shall be visible and operable from the Controller exterior door or an interior deadfront panel when required. The deadfront panel shall be constructed of anodized aluminum and shall have a continuous aluminum hinge. An anodized aluminum deadfront shall be utilized when the Controller environment is not conducive to exposed controls or as specified on drawings.
- I. All approval drawings shall be prepared per J.I.C. standards for engineers review prior to any fabrication of control equipment. The Controller shall be produced by a UL 508 listed shop. Proof of label availability shall be submitted with above drawing.
- J. The controller manufacturer shall provide a written warranty with approval drawings covering all Control 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.
- K. The controller manufacturer shall show satisfactory evidence that he maintains a fully equipped factory organization capable of furnishing adequate service for the equipment furnished, including replacement parts. Suppliers employing outside organizations for "ON CALL" service shall not be considered.
- L. The controller manufacturer shall have a service department capable to respond in emergency condition twenty-four/seven and three-hundred sixty-five days a year (24/7/365).

4.02 MOTOR CONTROL CENTER "A" MISCELLANEOUS CONTROLS AND EQUIPMENT

- A. **SERVICE ENTRANCE:** The motor control center (MCC) shall be designed for 277/480-volt, three-phase, four-wire power.
- B. **NORMAL POWER MAIN BREAKER:** Provide an 200 Amp, 3-pole, 480 volt Normal Power Main Breaker located in the motor control center, as shown on the drawings, for service entrance disconnect.
- C. **AUTOMATIC TRANSFER SWITCH:** Provide a 230 Amp, 3-pole, 480 volt Automatic Transfer Switch (ATS), per Component Specifications, mounted inside the motor control center as shown on drawings. ATS controller shall have a flush-mounted display with LED indicators for switch position and source availability. Controller shall also include test and time delay bypass control devices. Controller shall be mounted on the exterior door of the individual motor control center unit. **Generator equipment shall have a properly sized Emergency Main Breaker.**

- D. SERVICE ENTRANCE SURGE PROTECTION DEVICE: Provide a service entrance rated Type 2, AC power distribution Surge Protection Device (SPD-1), per Component Specifications, designed to protect all types of loads fed from distribution panels, branch panels and/or individual equipment panels. Units shall be UL listed and shall bear a UL label. The Surge Protection Device shall be rated for 160kA per phase and 80kA per mode. Unit shall come complete with a 30 amp, 480 volt circuit breaker for disconnect means.
- E. EMERGENCY PUMPS NO.1 AND NO.2: Provide a properly sized combination circuit breaker and NEMA rated motor starter with Class 10, ambient compensated overload protection and individual phase failure protection as indicated on drawing, for each pump. In addition, provide the following equipment and controls.
1. The pumps shall be controlled by a Duplex Pump Controller, per Component Specifications. The controller shall be capable of operating with float switches or a level controller with dry contact outputs for All-Stop, Lead Start and Lag Start during normal operation. In the automatic mode, the Duplex Pump Controller shall receive stop and start commands based upon the level in the station wet well as sensed by the submersible pressure/level transmitter or float switches. The Duplex Pump Controller shall be a standard, catalogued product of a water and wastewater automation equipment manufacturer regularly engaged in the design and manufacture of such equipment for a period of at least fifteen (15) years. Pump controller shall be UL Recognized for use in industrial control panels. The duplex controller shall perform all control functions as specified in Component Specifications Section. The duplex pump controller shall have the following indicators and controls for each pump:
 - a. Manual-Off-Automatic selector switch for Pump No.1
 - b. Manual-Off-Automatic selector switch for Pump No.2
 - c. Pump 1 / Pump 2 – Lead / Lag Selector Switch
 - d. Green "Pump 1 Running" pilot light
 - e. Green "Pump 2 Running" pilot light
 - f. Red "Pump 1 Seal Failure" pilot light
 - g. Red "Pump 2 Seal Failure" pilot light
 - h. Red "Pump 1 Failure" pilot light
 - i. Red "Pump 2 Failure" pilot light
 - j. Red "High Water" pilot light
 - k. Red "Low Water" pilot light
 2. Provide a properly sized Current Transformer, both per Component Specifications, for each pump. The Monitor shall provide a positive run

signal, monitor motor running current, and indicate motor running time and motor full load running amperes. In addition, motor monitor shall come complete with high or low amperes set points for the pump.

3. Provide a Duplex Alarm Telemetry system, per Component Specifications, for the Duplex Controller, which provides auxiliary normally open relay contact outputs for the following duplex controller alarms: auxiliary alarm, improper sequence, Motor 1 Failure, Motor 2 Failure, Motor 1 Seal Failure, Motor 2 Seal Failure and High Level. Alarm telemetry system shall be capable of integrating with a customer furnished future alarm dialer, SCADA system, FUTURE telemetry equipment, etc. Motor 1 Running, Motor 2 Running and Wetwell level signals shall also be provided for future use.
 4. Provide a 24-Hour/7-Day electronic time clock to run one emergency pump cycle once a day if emergency wetwell level has not been reached within the 24 hour period.
 5. Provide necessary relays to lockout emergency pumps when lift pumps are active. Emergency pumps are not to be ran at the same time that any lift pump is active.
- F. DISTRIBUTION TRANSFORMER FEEDER BREAKER: Provide a 40 amp, 2 pole, 480 volt main circuit breaker to feed the 15kVA Distribution Transformer and distribution panel LP.
- G. DISTRIBUTION TRANSFORMER: Provide a 480 volt primary, 120/240 volt, single-phase, three-wire secondary, 15kVA, dry type distribution transformer as shown on drawings. Transformer shall be dry-type, UL rated 180°C system with an average maximum rise by resistance of 115°C in a maximum ambient of 40°C. Transformer shall be self-cooled by natural convection and shall have isolating windings. Transformer shall be mounted inside the motor control center, as shown on drawings, and come complete with one (1) ten-inch (10") thermostatically controlled exhaust fan. Exhaust fan shall be mounted on the upper exterior door and filtered louvers shall be mounted on the lower exterior door of the individual motor control center unit. Exhaust fan shall be 10" diameter; 115VAC rated at 550 CFM at 1650RPM, and come complete with wire guard. Exhaust fan shall operate based on the adjustable thermostat, to help eliminate residual heat.
- H. DISTRIBUTION PANEL 'LP': Provide a thirty (12) circuit lightning panel equal to Square D Company type NQ with 80 Amp, 2 pole main breaker and number of branch breakers as shown on drawing lightning panel schedule. Lighting panel shall be mounted inside the motor control center.

- I. DISTRIBUTION PANEL SURGE PROTECTION DEVICE: Provide a Type 2, AC power distribution Surge Protection Device (SPD-2), per Component Specifications, designed to protect all types of loads fed from the distribution panel, branch panels and/or individual equipment panels. Units shall be UL listed and shall bear a UL label. Surge Protection Device shall be rated for 120kA per phase and 60kA per mode.
- J. FEEDER BREAKER: Provide a 200 Amp, 3-pole, 480 volt feeder breaker feeding MCC "B".

4.03 MOTOR CONTROL CENTER "B" MISCELLANEOUS CONTROLS AND EQUIPMENT

- A. POWER MONITOR: Provide a service entrance rated Power Monitor (PM), per Component Specifications. Power monitor shall constantly monitor the three-phase voltages to detect harmful power line conditions, caused by single-phasing, low voltage, phase reversal, and voltage unbalance. When a harmful condition is detected, no three-phase motors shall be allowed to operate. Phase monitor shall be protected by 1 amp, 480 volt fuses on the primary side.
- B. LIFT PUMPS NO.1 THROUGH NO.4: Provide a combination circuit breaker and Variable Frequency Drive starter (VFD), per Component Specifications, for each of the four Lift pumps. The Variable Frequency Drive shall come complete with 5% Line and Load Reactors (LR), per Component Specifications, to attenuate harmonics and provide protection from transients. VFD's shall be Allen-Bradley Power Flex 753, Yaskawa P7, or approved equal. The Full Load Amperes (FLA) of the variable frequency drive must be greater than the Full Load Amperes of the motor horsepower being furnished. The Contractor must use properly sized VFD cable, with ground, for each motor started by VFD's that require motor conductor runs exceeding the pump cable length or that require a junction box. Motor cable ground conductor shall land on a terminal on the VFD, per VFD manufacturer's requirements. Recommended cable manufacturers are Belden and LAPP, if required. VFD shall come with remote mounted keypad. VFD's shall be programmed to allow a maximum operating range of ninety percent (90%), per pump motor manufacturer. VFD keypad shall be mounted on the exterior door of the individual motor control center unit. In addition, provide the following equipment and controls for the Lift pumps.
 - 1. The pumps shall be controlled by a Quadraplex Pump Controller, per Component Specifications. The controller shall be capable of operating with float switches or a level controller with dry contact outputs for All-Stop, Lead Start, Lag 1 Start and Lag 2 Start during normal operation. In the automatic mode, the Quadraplex Pump Controller shall receive stop and start commands from the Level Meter/Controller, as described below, based upon the level in the station wetwell as sensed by a

submersible transducer. Back-up float switches shall be utilized in the event of a submersible pressure level transmitter failure and activate the common alarm light. All pumps shall be exercised uniformly. All electronic controls shall be bypassed (including delays) when the Man-Off-Auto switches are in the Manual or Off positions to allow motor control even in the event of a circuit failure. The Quadraplex Pump Controller shall provide variable delays for Power-On, Motor Failure, Motor Start, and Short Cycle. Field adjustable motor failure delays shall be provided in the range of five (5) seconds to five (5) minutes. Adjustable power-on delay shall also be included for the pump during initial startup or after a power failure.

2. Provide a Motor Monitor (MM-1, MM-2, MM-3 and MM-4) complete with properly sized Current Transformer, both per Component Specifications, for each Lift pump. The Motor Monitor shall provide a positive run signal, monitor motor running current, and indicate motor running time and motor full load running amperes. In addition, motor monitor shall come complete with high or low amperes set points for the pump.
 3. Provide two ten-inch (10") thermostatically controlled exhaust fans to properly ventilate each VFD unit. Exhaust fan shall operate based on temperature setting or when the variable frequency drive operates. Exhaust fans shall be mounted on the upper exterior door and filtered louvers shall be mounted on the lower exterior door of the individual motor control center unit.
 4. Provide a Quadraplex Alarm Telemetry system, per Component Specifications, for the Lift pumps controller, which provides auxiliary normally open relay contact outputs for the following alarms: auxiliary alarm, improper sequence, motor no.1 failure, motor no.2 failure, motor no.3 failure, motor no.4 failure, motor no.1 seal failure, motor no. 2 seal failure, motor no.3 seal failure, motor no.4 seal failure, and high level.
 5. Provide necessary relays to lockout emergency pumps when lift pumps are active. Emergency pumps are not to be ran at the same time that any lift pump is active.
- C. LEVEL METER/CONTROLLER: Provide a Level Meter/Controller, per Component Specifications, to interface with wetwell submersible transducer. All control setpoints shall be field adjustable throughout the complete signal range from the front of the meter/controller. Setpoints shall be displayed on a digital readout at any time via pushbutton. The setpoints shall be field adjustable to operate on rising above or falling below the desired setpoint. The Level Meter/Controller shall receive an analog signal from the wet pit

submersible pressure level transmitter. Back-up float switches shall be utilized in the event of a submersible pressure level transmitter failure and activate the common alarm light.

In addition, provide a signal failure relay option with two relays, to energize when the transducer signal goes above 20mA or falls below 4mA. The relays can energize on both high/low conditions or one can energize on high failure (signal above 20mA) and the other on low failure (signal loss). This failure alarm shall also energize a front panel flashing LED alarm indicator.

- D. **ANALOG SIGNAL LINE FILTER:** Provide analog signal Line Filter, per Component Specifications and as shown on drawings for the wetwell submersible pressure/level transmitter. Line filter shall protect associated equipment from transient voltage surges and induced voltages.
- E. **CONTROL POWER SURGE PROTECTOR:** Provide an in-line (series) 120 volt, single-phase, 20A continuous power Surge Protection Device, per Component Specifications, designed to protect all of the loads fed from the control power circuit.
- F. **CONTROL SECTION:** Provide one (1) forty-inch (30") wide Control Section for the motor control center. All indicators, controls, and communication devices shall be housed in the control section, unless otherwise noted herein.
- G. **COMMON ALARM LIGHT:** Provide a weatherproof exterior common Alarm Light (AL) with red Lexan lens mounted on the exterior of the Motor Control Center Building, or as directed by the project engineer. Alarm light enclosure shall be constructed of die cast aluminum with a sturdy mounting bracket. Alarm light shall be suitable for wet locations and comply with UL standard 1598, for hazardous locations where the lamp, socket and wiring require protection from rain, corrosive fumes, non-combustible dusts, moisture, non-explosive vapors and gases. The alarm light shall burn dim and steady during normal conditions to indicate electrical power "ON" and lamp good. During any alarm condition, the alarm light shall flash brightly.

PART 5 – FIELD INSTRUMENTATION AND FIELD MODIFICATIONS

- 5.01 **WETWELL SUBMERSIBLE PRESSURE/LEVEL TRANSMITTER:** Provide a Submersible Pressure/Level Transmitter, per Component Specifications, for the pump station wetwell (see detail on drawings). The submersible pressure/level transmitter shall provide an analog level signal to the wetwell level/meter controller proportional to the wetwell level.
- 5.02 **WETWELL BACKUP FLOAT SWITCHES:** Provide a backup float control system for the pumping station, as shown on the drawings, to operate the pumps in the event of

a submersible pressure/level transmitter failure. Back-up Float Switches (F), per Component Specifications, shall be mounted in the wetwell and interface with the Lift and Emergency pump controllers. Backup float switches shall be set at one foot (1') above (High) and below (Low) normal operating levels. Normal operating levels shall be set per Project Engineers direction. The float switch shall be a direct acting switch and contain a single pole mercury switch, which actuates when the longitudinal axis of the float is horizontal and deactuates when the liquid level falls 1" below the actuation elevation. The float shall have a chemical resistant polypropylene casing with a firmly bonded electrical cable protruding. One end of the cable shall be permanently connected to the enclosed mercury switch and the entire assembly shall be capsulated to form a completely watertight and impact resistance unit. Provide the following float switches and control points:

- A. High Level Alarm (Rising Level)
- B. Lag Emergency Pump Start (Rising Level)
- C. Lead Emergency Pump Start (Rising Level)
- D. Lag 3 Lift Pump Start (Rising Level)
- E. Lag 2 Lift Pump Start (Rising Level)
- F. Lag 1 Lift Pump Start (Rising Level)
- G. Lead Lift Pump Start (Rising Level)
- H. All Stop (Falling Level)

5.03 SUBMERSIBLE PRESSURE/LEVEL TRANSMITTER INSTALLATION: The submersible pressure/level transmitter shall be field installed by the Contractor, per project Engineer's direction. Transmitter shall be suspended six-inches (6") above the bottom of the wetwell. The Contractor shall provide and install 3" PVC (length as required for wetwell) with 1/2" holes drilled thru pipe every six-inches (6") throughout the entire length of pipe. PVC pipe shall be connected or anchored to the wetwell, if possible.

5.04 CONDUITS: All conduits entering control panels shall be properly sealed, per plans, to ensure corrosive gasses, and water/moisture does not enter into panel. It is the responsibility of the Contractor to provide and install adequate conduit seals. It is recommended that re-enterable sealant compounds are used; equal to 3M Scotchcast 2112C or Alesko Epoxy Sealing Putty.

5.05 GROUNDING: All control panels shall be properly grounded per Section 16060 - Grounding and Bonding for Electrical Systems. The Contractor shall provide certified test reports of ground resistance.

- A. Certification that the materials and installation are in accordance with the drawings and specifications.
- B. Certification by the Contractor that the complete installation has been properly installed and tested.

PART 6 – COMPONENT SPECIFICATIONS

6.01 SERVICE ENTRANCE SURGE PROTECTION DEVICE: The Surge Protection Device (SPD) shall be mounted in the control panel / motor control center section adjacent to the Main Breaker. The SPD is connected to the main bus in the panel with conductors of size and of no greater length than indicated in the Surge Protection Device manufacturer's installation instructions. SPD shall be a Type 2 device ideal for distribution panels, branch panels and critical loads.

- A. SPD shall provide transient voltage surge suppression and electrical high frequency noise filtering. Unit is designed for parallel connection to the main bus. SPD unit uses selenium cells and metal oxide varistors to achieve its performance. Products using gas tubes, spark gaps, silicon avalanche diodes or other components, which under failed conditions would cause system failure, are not acceptable.
- B. Manufacturer qualifications: The product of a manufacturer engaged in the commercial design and manufacture of the type of product described herein for a minimum ten (10) years.
- C. Standards: Product complies with the requirements of the following:
 - 1. cUL
 - 2. CE Compliant
 - 3. UL 1449 3rd Edition
 - 4. UL 1283 Listed
 - 5. NEMA LS1 Compliance
- D. Operating Voltage: 277/480 volts, 3-phase, 4-wire + ground
- E. Maximum Continuous Operating Voltage (MCOV): greater than 115 percent of nominal voltage for all products. All suppression filter systems comply with NEMA LS 1.
- F. Frequency: Operating frequency range of 47 – 64 Hertz.
- G. Protection Modes: all phases – phase to ground; all phases – phase to neutral; all phases – phase to phase; and neutral to ground.
- H. Rated Single Pulse Surge Current Capacity: at rated voltage, no less than:
 - 160,000 A Line to Line
 - 80,000 A Line to Neutral
 - 80,000 A Line to Ground
 - 80,000 A Neutral to Ground

- I. Tested Single Pulse Surge Current Capacity: Filter system is designed to withstand a single pulse surge current up to 150 percent of the design rating and tested at an independent test laboratory. In the absence of testing facilities capable of such testing, testing of individual components or sub-assemblies within a mode is accepted by ANSI C62.41-1991; the testing includes a Category C1 surge test followed by a second Category C1 test. The test results demonstrate the unit does not degrade by more than 10 percent from the initial test.
- J. Clamping Voltage: Suppression filter system clamping voltages are in compliance NEMA LS1-1992.
- K. High Frequency Filter: EMI-RFI noise rejection or attenuation values comply with test and evaluation procedures of NEMA LS1-1992.
- L. Overcurrent Protection: Unit includes coordinated UL 489 or UL 198 listed or recognized overcurrent protection devices; if fuses are used unit incorporates non-encapsulated, field replaceable fuses.
- M. Documentation: Provide product data including equipment manual, electrical and mechanical drawings indicated dimensions weights, mounting provisions, connection details and layout diagram, certified tests of UL1449 Listing/Clamp Voltages and NEMA LS1 compliance, certified single pulse surge current capacity testing, and minimum repetitive surge current capacity testing.
- N. Status Indicators: Unit has long-life, solid state, externally visible status indicators that monitor the on-line status of each phase of the unit.
- O. Warranty: 15-years Unlimited Free Replacement for service entrance Surge Protection Device.
- P. Service entrance Surge Protection Device system shall be equal to Surge Suppression Inc. Model SSMA163Y2.

TAG
SPD-1

SERVICE
Service Entrance Surge Protection Device

6.02 AUTOMATIC TRANSFER SWITCH: Automatic Transfer Switch shall be provided with number of poles, amperage, voltage, withstand, and close-on ratings as shown on the plans. Each automatic transfer shall consist of an inherently double throw power transfer switch mechanism and a microprocessor controller to provide automatic operation. All transfer switches and controllers shall be the products of the same manufacturer.

- A. Codes and Standards: The automatic transfer switches and controls shall conform to the requirements of:
1. UL 1008 – Standard for Transfer Switch Equipment
 2. NFPA 70 – National Electrical Code
 3. NFPA 110 – Emergency and Standby Power Systems
 4. IEEE Standard 446 – IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
 5. NEMA Standard ICS10-1993 (formerly ICS2-447) – AC Automatic Transfer Switches
 6. NEC Articles 700, 701, 702
 7. International Standards Organization ISO 9001
- B. Acceptable Manufacturers: Automatic transfer switches shall be ASCO 300 Series. Any alternate shall be submitted for approval to the consulting engineer at least ten (10) days prior to bid. Alternate bids must list any deviations from this specification.
- C. PRODUCTS
1. Mechanically Held Transfer Switch
 - a. The transfer switch shall be electrically operated and mechanically held. The electrical operator shall be a single-solenoid mechanism, momentarily energized. Main operators which include over current disconnect devices shall not be acceptable. The switch shall be mechanically interlocked to ensure only two possible positions, normal or emergency.
 - b. The switch shall be positively locked and unaffected by momentary outages, so that contact pressure is maintained at a constant value and contact temperature rise is minimized for maximum reliability and operating life.
 - c. All main contacts shall be silver composition. Switches rated 600 amperes and above shall have segmented blow-on construction for high withstand current capability and be protected by separate arcing contacts.
 - d. Inspection of all contacts shall be possible from the front of the switch without disassembly of operating linkages and without disconnection of power conductors. A manual operating handle shall be provided for maintenance purposes. The handle shall permit the operator to manually stop the contacts at any point throughout their entire travel to inspect and service the contacts

when required.

- e. Designs utilizing components of molded-case circuit breakers, contactors, or parts thereof, which are not intended for continuous duty, repetitive switching or transfer between two active power sources, are not acceptable.
- f. Where neutral conductors must be switched, the ATS shall be provided with fully rated neutral transfer contacts.
- g. Where neutral conductors are to be solidly connected as shown on the plans, a neutral conductor plate with fully rated AL-CU pressure connectors shall be provided.

2. Microprocessor Controller

- a. The controller shall direct the operation of the transfer switch. The controller's sensing and logic shall be controlled by a built-in microprocessor for maximum reliability, minimum maintenance, and inherent serial communications capability. The controller shall be connected to the transfer switch by an interconnecting wiring harness. The harness shall include a keyed disconnect plug to enable the controller to be disconnected from the transfer switch for routine maintenance.
- b. The controller shall be enclosed with a protective cover and be mounted separate from the transfer switch unit for safety and ease of maintenance. Sensing and control logic shall be provided on printed circuit boards. Interfacing relays shall be industrial grade plug-in type with dust covers.
- c. The controller shall meet or exceed the requirements for Electromagnetic Compatibility (EMC) as follows:
 - 1. ANSI C37.90A/IEEE 472 Voltage Surge Test
 - 2. NEMA ICS – 109.21 Impulse Withstand Test
 - 3. IEC801-2 Electrostatic discharge (ESD) immunity
 - 4. ENV50140 and IEC 801 – 3 Radiated electromagnetic field immunity
 - 5. IEC 801 – 4 Electrical fast transient (EFT) immunity
 - 6. ENV50142 Surge transient immunity
 - 7. ENV50141: Conducted radio-frequency field immunity
 - 8. EN55011: Group 1, Class A conducted and radiated emissions
 - 9. EN61000 – 4-11 Voltage dips and interruptions immunity

D. OPERATION

1. Voltage and Frequency Sensing

- a. The voltage of each phase of the normal source shall be monitored, with pickup adjustable to 95% of nominal and dropout adjustable from 70% to 90% of pickup setting.
- b. Single-phase voltage and frequency sensing of the emergency source shall be provided.

2. Time Delays

- a. An adjustable time delay shall be provided to override momentary normal source outages and delay all transfer and engine starting signals.
- b. An adjustable time delay shall be provided on transfer to emergency, adjustable from 0 to 5 minutes for controlled timing of transfer of loads to emergency.
- c. A generator stabilization time delay shall be provided after transfer to emergency.
- d. An adjustable time delay shall be provided on retransfer to normal, adjustable to thirty (30) minutes. Time delay shall be automatically bypassed if emergency source fails and normal source is acceptable.
- e. A five (5) minute cool down time delay shall be provided on shutdown of engine generator.
- f. All adjustable time delays shall be field adjustable without the use of special tools.

3. Additional Features

- a. A set of contacts rated 5 amps, 32 VDC shall be provided for a low-voltage engine start signal. The start signal shall prevent dry cranking of the engine by requiring the generator set to reach proper output, and run for the duration of the cool down setting, regardless of whether the normal source restores before the load is transferred.

- b. A push-button type test switch shall be provided to simulate a normal source failure.
- c. A push-button type switch to bypass the time delay on transfer to emergency, the engine exerciser period on the retransfer to normal time delay whichever delay is active at the time the push-button is activated.
- d. Terminals shall be provided for a remote contact which opens to signal the ATS to transfer to emergency and for remote contacts which open to inhibit transfer to emergency and/or retransfer to normal.
- e. Auxiliary contacts, rated 10 amps, 250 VAC shall be provided consisting of one contact, closed when the ATS is connected to the normal source and one contact closed, when the ATS is connected to the emergency source.
- f. Indicating lights shall be provided; one to indicate when the ATS is connected to the normal source (green) and one to indicate when the ATS is connected to the emergency source (red). Also, provide indicating lights for both normal and emergency source availability.
- g. Terminals shall be provided to indicate actual availability of the normal and emergency sources, as determined by the voltage sensing pickup and dropout settings for each source.
- h. Engine Exerciser: An engine generator exercising timer shall be provided, including a selector switch to select exercise with or without load transfer.
- i. Inphase Monitor: An Inphase monitor shall be inherently built into the controls. The monitor shall control transfer so that motor load inrush currents do not exceed normal starting currents, and shall not require external control of power sources. The inphase monitor shall be specifically designed for and be the product of the ATS manufacturer.
- j. Selective Load Disconnect: A double throw contact shall be provided to operate after a time delay, adjustable to 20 seconds prior to transfer and reset 0 to 20 seconds after transfer. The contact can be used to selectively disconnect specified load(s) when the transfer switch is transferred. Output contacts shall be rated 6 amps at 28 VDC or 120 VAC.

E. ADDITIONAL REQUIREMENTS

1. Withstand and Closing Ratings (WCR): The ATS shall be rated to close on and withstand the available RMS symmetrical short circuit current at the ATS terminals with the type of over current protection shown on the plans. WCR ATS ratings shall be as shown below in Table 1 when used with specific circuit breakers:

Table 1: WCR ATS ratings

<u>ATS Size</u>	<u>Withstand & Closing Rating MCCB</u>	<u>W/CLF</u>
30	22,000A	100,000
70 – 200	22,000A	200,000
230	22,000A	100,000
260 – 400	42,000A	200,000
600 – 1200	65,000A	200,000
1600 – 2000	85,000A	200,000
2600 – 3000	100,000A	200,000

2. Tests and Certification
 - a. The complete ATS shall be factory tested to ensure proper operation of the individual components and correct overall sequence of operation and to ensure that the operating transfer time, voltage, frequency and time delay settings are in compliance with the specification requirements.
 - b. Upon request, the manufacturer shall provide a notarized letter certifying compliance with all of the requirements of this specification including compliance with the above codes and standards, and withstand and closing ratings. The certification shall identify, by serial number(s), the equipment involved. No exceptions to the specifications, other than those stipulated at the time of the submittal, shall be included in the certification.
 - c. The ATS manufacturer shall be certified to ISO 9001: 2000 International Quality Standard and the manufacturer shall have third party certification verifying quality assurance in design/development, production, installation, and servicing in accordance with ISO 9001: 2000.
3. Service Representation
 - a. ATS manufacturer shall maintain a national service organization of company-employed personnel located throughout the

contiguous United States. The service center's personnel must be factory trained and must be on call twenty-four (24) hours a day, 365 days a year.

- b. The manufacturer shall maintain records of each switch, by serial number, for a minimum of twenty (20) years.
- c. For ease of maintenance, the transfer switch nameplate shall include drawing numbers and serviceable part numbers.

TAG
ATS

SERVICE
Normal and Emergency Power Transfer Switch

6.03 PHASE FAILURE/UNBALANCE/UNDER VOLTAGE/REVERSAL RELAY: Phase monitor shall be designed to protect 3-phase motors regardless of size and for use with 200 – 240 or 425 – 485 VAC, 50 to 60 Hz motors to prevent damage. The unit shall constantly monitor the three phase voltages to detect harmful power line conditions, caused by single phasing, low voltage, phase reversal and voltage unbalance. When a harmful condition is detected, an output relay is deactivated after a trip delay. The output relay shall reactivate after power line conditions return to an acceptable level for the specified Restart Delay. The trip delay shall prevent nuisance tripping due to rapidly fluctuating power line conditions. Phase monitor shall have the following features and functions.

- A. Under Voltage:
 - Trip: -15% of setting for 230V (-10% for 480V)
 - Reset: -12% of setting for 230V (-8% for 480V)
- B. Over Voltage:
 - Trip: -15% of setting for 230V (-10% for 480V)
 - Reset: -12% of setting for 230V (-8% for 480V)
- C. Phase Unbalance:
 - Trip: 7% with 5 second trip delay
15% with 1 second trip delay
 - Reset: 6%
- D. Trip Delay:
 - 5 seconds (delay is reduced to 1 second if Phase Unbalance is 15% or greater)
- E. Reset Delay:
 - 2 seconds standard (5-60 seconds optional)
- F. Voltage Range: 200V to 240V or 425V to 525V
- G. Output Rating: 10A resistive @ 240VAC
6A resistive @ 240VAC
- H. Operating Temp: -40°C to +50°C, -38°F to +122°F
- I. Storage Temp: -45°C to +85°C, -47°F to +185°F
- J. Enclosure: Lexan, surface mount
- K. UL and cUL listed

TAG
PM

SERVICE
Electrical System Power Monitor

6.04 VARIABLE FREQUENCY DRIVE: Provide enclosed Variable Frequency Drive(s) suitable for operation at the current, voltage, and horsepower indicated on the schedule. Conform to requirements of NEMA ICS 3.1. Variable Frequency Drive(s) shall conform to the following specifications:

A. General Requirements

1. The VFD shall convert the input AC main power to an adjustable frequency and voltage as defined in the following sections.
2. The VFD shall be listed and labeled as a complete unit and shall include all accessories and requirements as described in this section.
3. VFD shall have a minimum design life of ten (10) years.

B. Ratings

1. VFD must have the minimum range of horsepower ratings: 0.75 to 175 HP at 240 VAC; 0.75 to 1000 HP at 480 VAC; 1 to 250 HP at 600 VAC.
2. VFD must have Variable Torque ratings and to optimize the VFD size for fan and pump applications.
3. VFD must operate, without fault or failure, when voltage varies plus 10% or minus 15% from rating, and frequency varies plus or minus 5% from rating.
4. VFD shall be 480 volts, 60 Hz, 3 Phase.
5. Displacement Power Factor: 0.98 over entire range of operating speed and load.
6. Service Factor: 1.0
7. Operating Ambient Temperature: NEMA 1 (IP20): -10°C to 40°C (14°F to 104°F); Open Chassis: -10°C to 50°C (14°F to 122°F).
8. Ambient storage temperature: -20°C to 60°C (-4°F to 140°F).
9. Humidity: 0% to 95%, non-condensing.
10. Altitude: Up to 3,300 feet (1000m), higher altitudes achieved by derating.
11. Vibration: 9.81m/s² (1 G) from 10 to 20 Hz; 2.0 m/s² (0.2 G) from 20 Hz to 55 Hz.
12. Minimum Efficiency: 96% at half speed; 98% at full speed.
13. Starting Torque: 120% starting torque shall be available from 3 Hz to 60 Hz.
14. Overload capability: 120% of rated FLA for 60 seconds; 170% of rated FLA peak.
15. Controlled speed range: 40:1.

16. The VFD's shall have EMI/RFI filters. The RFI filters shall allow the entire VFD assembly to be CE Marked and the VFD shall meet product standard EN 61800-3 for the First Environment restricted. No Exceptions.
17. Total Harmonic Distortion (THD) compliance: Given the information provided by the customer's electric power single line diagram and distribution transformer data, the VFD manufacturer shall carry out an analysis of the system. The analysis reviews the potential for the proposed equipment, and any existing equipment, to meet IEEE 519 (tables 10.2 and 10.3) recommendations at the Point of Common Coupling (PCC). The result of the analysis shall determine if additional power quality improvement measures should be included in the proposal to meet the THD recommendations of IEEE 519. The PCC shall be at the primary side of the main distribution transformer.
18. VFDs must be suitable for use on a circuit capable of delivering not more than 100,000 RMS symmetrical amperes.

C. Design

1. VFD shall employ microprocessor based inverter logic, isolated from all power circuits.
2. VFD shall include surface mount technology with protective coating.
3. VFD shall be able to be mounted with the heatsink out the back of the enclosure.
4. VFD shall employ a PWM (Pulse Width Modulated) power electronic system, consisting of:
 - a. Input Section:
 - i. VFD input power stage shall convert three-phase AC line power into a fixed DC voltage via a solid-state full wave diode rectifier, with MOV (Metal Oxide Varistor) surge protection.
 - ii. A minimum of 3% DC bus impedance to minimize reflected current (40 HP and larger).
 - b. Intermediate Section:
 - i. DC bus as a supply to the VFD output Section shall maintain a fixed voltage with filtering and short circuit protection.
 - ii. DC bus shall be interfaced with the VFD diagnostic logic circuit, for continuous monitoring and protection of the power components.
 - c. Output Section
 - i. Insulated Gate Bipolar Transistors (IGBTs) shall convert

- DC bus voltage to variable frequency and voltage.
 - ii. The VFD shall employ PWM sine coded output technology to power the motor.
- 5. VFD shall offer a low noise, low carrier frequency setting.
- 6. VFD shall have an adjustable carrier frequency, from 1 kHz to 15 kHz below 100 HP; 1 kHz to 10 kHz from 100 HP to 300 HP; 1 kHz to 5 kHz 350 HP and larger. (480 V Class).
- 7. VFD must have a motor noise control function that monitors the load at all times and reduces the output voltage automatically, reducing motor audible noise.
- 8. VFD shall be able to be mounted next to each other with zero clearance for ratings up to 30 HP.
- 9. VFD shall have embedded Modbus RTU/Memobus accessible via a RS-422/485 communication port. The termination resistor shall be built-in.
- 10. VFD shall include three independent multi-function analog inputs, individually selectable for 0-10 VDC, -10 to +10 VDC, 0-20 mA or 4-20 mA. Each input shall have a programmable bias and gain. The inputs shall be individually programmed for, but not limited to:
 - a. Speed Reference
 - b. PID Set Point
 - c. PID Feedback
 - d. Motor Temperature
 - e. Differential PID Feedback
- 11. VFD shall include eight independent multi-function digital input terminals that can be set for sinking/sourcing and internal/external power supplies. The inputs shall be individually programmed for, but not limited to:
 - a. PID Enable/Disable
 - b. Drive Enable
 - c. Preset Speeds
 - d. Fault Reset
 - e. Emergency Override
- 12. VFD shall include one multi-function 32 kHz pulse train input that shall be programmed for, but not limited to:
 - a. Frequency Reference
 - b. PID Set Point
 - c. PID Feedback

13. VFD shall include two individually selectable 0-10 VDC, -10 to +10 VDC, or 4-20 mA analog outputs. The outputs shall be individually programmed for, but not limited to:
 - a. Output Frequency
 - b. Output Current
 - c. Output Power
 - d. PID Feedback
14. VFD shall include one fixed form "C" Fault contact, two programmable multi-function form "A" contacts, and one programmable form "C" contact. These output relay contacts shall all be rated for 1A at 250 VAC and shall be programmed for, but not limited to:
 - a. Speed Agree
 - b. Zero Speed
 - c. Drive Ready
 - d. During Run
 - e. Underload Detection
15. VFD shall include a control power loss ride through capable of 2 seconds.
16. VFD shall provide 24 VDC, 150ma transmitter power supply.
17. VFD shall include an external fault input function to be programmed a digital input, which shall be programmable for a normally open or normally closed contact. These terminals can be used for the connection of firestats, freezestats, high-pressure limits or similar safety devices.
18. VFD shall have DC injection braking capability, to prevent fan "wind milling" at start or stop, adjustable, current limited.
19. VFD shall have a bidirectional speed search function to catch a spinning motor, regardless of its direction.
20. VFD unit shall include the following meters to estimate use of energy:
 - a. Elapsed Time Meter
 - b. Kilowatt Meter
 - c. Kilowatt Hour Meter
21. VFD shall have a fault trace function to capture relevant monitor values at the time of the most recent fault.
22. VFD shall include diagnostic fault history with the last 10 fault indications and time stamp as well as heatsink cooling fan operation hours.
23. VFD shall have preventative maintenance monitors for predicting the remaining life of the IGBTs, cooling fans, bus capacitors and pre-charge relay.

24. VFD shall have the following minimum protective functions: Overheat, motor overload, VFD overload, short circuit, overvoltage, undervoltage, input phase loss, output phase loss, output ground fault and overcurrent.
25. VFD shall have a USB port for easy connection to a computer (PC) for startup and troubleshooting.
26. VFD shall have an eight-language removable digital operator with an illuminated LCD display.
27. VFD shall have an internal time clock. The internal time clock shall include a back up via battery. The time clock will be used to date and time stamp faults and record operating parameters at the time of fault. The internal time clock can be programmable to control start/stop functions, running speeds, PID parameter sets and digital output relays.
28. VFD shall provide plain language readouts of output frequency in hertz, PID feedback in percent, output voltage in volts, output current in amps, output power in kilowatts, DC bus voltage in volts, heatsink temperature in degrees, digital input terminal status, and fault conditions.
29. VFD shall have selectable and user-customizable engineering units for easy configuration of keypad displays to match process and feedback labels in units such as PSI, GPM, and Feet.
30. VFD shall include a user selectable PID control loop, to provide closed loop set point control capability, from a feedback signal, eliminating the need for closed loop output signals from a building automation system. The PID controller shall have a differential feedback capability for closed loop control of fans and pumps for pressure, flow or temperature regulation in response to dual feedback signals.
31. VFD shall include fan and pump specific application presets. The parameter presets can be used to help facilitate start-up. The presets will program all parameters and customer interfaces for a particular application (Fans, Pumps) to reduce programming time.
32. An energy saving sleep function shall be available in both open loop (follower mode) and closed-loop (PID) control, providing significant energy savings while minimizing operating hours on driven equipment. When the sleep function senses a minimal deviation of a feedback signal from set point, or low demand in open loop control, the system reacts by stopping the driven equipment. Upon receiving an increase in speed command signal deviation, the drive and equipment resume normal operation.
33. VFD shall include loss of input signal protection, with a selectable response strategy including running at a preset speed.
34. VFD shall have an underload detection function that monitors the load and will stop the system in the event of a fan belt or pump shaft failure.
35. VFD shall include electronic thermal overload protection for both the drive and the motor. The electronic thermal motor overload shall be approved by UL.

36. VFD shall have a removable control wiring terminal board that stores the drive's parameter settings. The terminal board can be installed into a new drive and transfer all settings to the new drive. The control wiring shall not need to be removed.
37. VFD shall use 24 VDC cooling fans for all ratings. Fans shall be mounted at the top of the drive for easier access. No tools shall be required to replace the fans.
38. VFD shall include the following additional program functions:
 - a. Capability to reset all parameters back to the factory settings.
 - b. Capability to reset all parameters back to a user-defined set of parameters.
 - c. Capability to see only the parameters that have been modified.
 - d. Ability to set the motor speed in Hertz, RPM, percent or custom units with units label.
 - e. Critical frequency rejection capability: 3 selectable, adjustable dead bands.
 - f. Auto restart capability: 0 to 10 attempts with adjustable delay between attempts.
 - g. Ability to close fault contact after the completion of all fault restart attempts.
 - h. Kinetic Energy Braking (KEB) function for stopping at power loss.
 - i. Overvoltage suppression function for cyclic regenerative loads.
 - j. Stall prevention capability.
 - k. "S" curve soft start / soft stop capability with four programmable corners.
 - l. Four sets of acceleration/deceleration times, selectable via digital input.
 - m. Acceleration/deceleration adjustment from 0.00 to 6000 seconds while running.
 - n. Fourteen preset and 1 custom volts per hertz patterns.
 - o. Programmable security code to prevent parameter setting changes.
 - p. Heatsink over temperature speed fold back capability.
 - q. Terminal status indication.
 - r. Motor thermistor input.
 - s. Reverse direction lockout.
 - t. Current limit adjustment from 30% to 200% of rated current of the motor.
 - u. Input signal or serial communication loss detection and response strategy.
 - v. Automatic energy saving function.
 - w. Undertorque/Overtorque Detection.
 - x. Overexcitation braking function to quickly stop the motor.

- y. Cooling fan failure detection and selectable drive action.
 - z. Select any of seventeen preset speeds while running.
 - aa. Ability to remove of digital operator during VFD operation.
- D. Installation: Installation shall be in compliance with manufacturer's instructions, drawings and recommendations.
- E. Product Options
 - 1. Network Communication: DeviceNet, EtherNet/IP, Modbus TCP/IP, PROFIBUS-DP, PROFINET, BACnet, Lonworks, Metasys (N2), Apogee (P1).
 - 2. Analog Outputs: Option card providing three additional programmable analog outputs.
 - 3. Auxiliary Control Power Unit: VFD control circuit can be powered using separate 24 VDC supply.
 - 4. Remote Operator Mounting Kit: VFD's operator can be mounted in the control cabinet behind a UL Type 4X membrane.
 - 5. Outdoor Operator: VFD operator with special LCD capable of being seen outside in bright sun at high ambient temperatures.
- F. Manufacturers
 - 1. VFD shall be P1000 type, manufactured by Yaskawa America Inc.
 - 2. Motors should be inverter duty rated, per NEMA MG1 parts 30 and 31, for motor-drive compatibility.
- G. Warranty: Provide VFD warranty, for one (1) year from date of startup, not to exceed eighteen (18) months from date of shipment. Warranty shall include parts, and labor allowance for repair hours.

TAG
VFD

SERVICE
Lift Pumps Variable Frequency Drive

6.05 LINE REACTOR: Provide a Line Reactor for each Variable Frequency Drive being furnished. The Reactor shall be properly rated for the motor amperes required. The Reactor shall have a 5% filter rating to alternate harmonics and provide protection from transients. Line reactor(s) shall have the following features.

- A. Standard impedance values by calculation: 1.5%, 2%, 3%, 4%, 5% available
- B. Impedance Basis: Reactor rated current, line voltage, frequency and inductance
- C. Service Factor: Reactors rated 1 to 750 Amps - 150% of rating; Reactors rated above 750 Amps - 125% of rated minimum.
- D. Overload Rating: 200% of rated for 30 minutes; 300% of rated for 1 minute
- E. Maximum System Voltage: 600 Volts (units with terminal blocks); 690 Volts

- (units with box lugs or tab terminals)
- F. Maximum Switching Frequency: 20 kHz
 - G. Insulation System: Class N (200°C 392°F)
 - H. Temperature Rise (*open or enclosed reactors*): 135°C 275°F (maximum)
 - I. Ambient Temperature (*open or enclosed reactors*): 45°C 113°F (Full rated)
 - J. Altitude (*maximum*): 1000 meters
 - K. Fundamental Frequency (*Line or Load*): 50/60 Hz
 - L. Approvals: CE, UL-508, CSA C22.2
 - M. Inductance Curve (*typical*): 100% at 100% current; 100% at 150% current; 50% at 350% current (minimum)
 - N. Inductance Tolerance: +/- 10%
 - O. Impregnation: High Bond Strength "Solvent-Less" Epoxy, 200° C; UL94HB recognized
 - P. Dielectric Strength: 3000 volts RMS (4243 volts peak)
 - Q. dV/dT Protection: Meets NEMA MG-1, part 31 (same as inverter duty motors)
 - R. Agency Approvals: UL-508 File E180243 Component Listed (1 amp – 2400 amps); UL-508 File E180243 UL Listed NEMA 1 units (1 amp – 2400 amps)
Note: Short Circuit rating not required under Exception No.1 of UL508A SB4.2.1 effective 4/25/06; CSA C22.2 File LR29753-13 CSA Certified (1 amp – 2400 amps); Class N, 200° C File E66214, Type 200-18, UL Recognized Insulation System; CE Marked
 - S. Material: Core Steel: Electrical grade high frequency silicon steel; Windings: High dielectric withstand solid copper conductor (220° C); Enclosures: Sheet steel per UL and CSA requirements. Painted ANSI-61 Grey; Brackets: ASTM structural steel or structural aluminum; Sheet Insulation: DuPont Nomex 410 (220° C); Epoxy: Ripley Resin Type 468-2 (220° C)
 - T. Construction: CORE: Electrical grade silicon steel magnetic laminations; Windings: 3000 volts RMS dielectric strength (coil-to-coil & coil-to-core);
 - U. Assembly: Windings are assembled onto EI laminations, secured in place & epoxy impregnated for minimum noise & maximum structural rigidity.
 - V. Testing: Inductance, Hi-Pot 3000 Volts RMS (5656 volts peak)

TAG

LR

SERVICE

VFD Line and Load Reactor

6.06 PANELBOARD SURGE PROTECTION DEVICE (SPD): The SPD shall be mounted in the motor control center section adjacent to the distribution panelboard. The SPD is connected to the main bus in the panel with conductors of size and of no greater length than indicated in the Surge Protection Device manufacturer's installation instructions. SPD shall be a Type 2 device ideal for distribution panels.

- A. SPD shall provide transient voltage surge suppression and electrical high frequency noise filtering. Unit is designed for parallel connection to the main bus. SPD unit uses selenium cells and metal oxide varistors to achieve its performance. Products using gas tubes, spark gaps, silicon avalanche diodes

or other components, which under failed conditions would cause system failure, are not acceptable.

- B. Manufacturer qualifications: The product of a manufacturer engaged in the commercial design and manufacture of the type of product described herein for a minimum five (5) years.
- C. Standards: Product complies with the requirements of the following:
 - 1. cUL
 - 2. CE Compliant
 - 3. UL 1449 3rd Edition
 - 4. UL 1283 Listed
 - 5. NEMA LS1 Compliance
- D. Operating Voltage: 120/240 volts, 1-phase, 3-wire + ground
- E. Maximum Continuous Operating Voltage (MCOV): greater than 115 percent of nominal voltage for all products. All suppression filter systems comply with NEMA LS 1.
- F. Frequency: Operating frequency range of 47 – 64 Hertz.
- G. Protection Modes: all phases – phase to ground; all phases – phase to neutral; all phases – phase to phase; and neutral to ground.
- H. Rated Single Pulse Surge Current Capacity: at rated voltage, no less than:

120,000 A Line to Line
60,000 A Line to Neutral
60,000 A Line to Ground
60,000 A Neutral to Ground

- I. Tested Single Pulse Surge Current Capacity: Filter system is designed to withstand a single pulse surge current up to 150 percent of the design rating and tested at an independent test laboratory. In the absence of testing facilities capable of such testing, testing of individual components or sub-assemblies within a mode is accepted by ANSI C62.41-1991; the testing includes a Category C1 surge test followed by a second Category C1 test. The test results demonstrate the unit does not degrade by more than 10 percent from the initial test.
- J. Clamping Voltage: Suppression filter system clamping voltages are in compliance NEMA LS1-1992.
- K. High Frequency Filter: EMI-RFI noise rejection or attenuation values comply with test and evaluation procedures of NEMA LS1-1992.
- L. Overcurrent Protection: Unit includes coordinated UL 489 or UL 198 listed or recognized overcurrent protection devices.
- M. Documentation: Provide product data including equipment manual, electrical and mechanical drawings indicated dimensions weights, mounting provisions, connection details and layout diagram, certified tests of UL1449 Listing/Clamp Voltages and NEMA LS1 compliance, certified single pulse surge current capacity testing, and minimum repetitive surge current capacity testing.
- N. Status Indicators: Unit has long-life, solid state, externally visible status

- indicators that monitor the on-line status of each phase of the unit.
- O. Warranty: 15-years Unlimited Free Replacement for panelboard SPD.
- P. Panelboard surge protection system shall be equal to Surge Suppression, Inc. Model SSM123D1.

TAG
SPD-2

SERVICE
Panelboard Surge Protection Device

6.07 CONTROL POWER SURGE PROTECTION DEVICE (SPD): The surge protection device shall be mounted in the control panel in series with the control power circuit. Provide a single-phase, in-line series AC power line surge protector with the following features:

- A. Rated voltage shall be 120 VAC @ 60Hz.
- B. Current rating shall be 20 Amps @ 40°C.
- C. The protection circuitry shall automatically reset after the transient has passed.
- D. Protection modes shall be: Line to Neutral, Line to Ground, and Neutral to Ground.
- E. Provide three (3) Green LED indicators to indicate protection status of each mode when power is present (L-N, L-G, N-G).
- F. Varistors with integral thermally activated elements shall be used to open in the event of overheating due to the abnormal overvoltage, limited current conditions outlined in UL1449. The lower inductance of the varistors shall result in improved clamping performance to fast overvoltage transients.
- G. Metal Oxide Varistors (MOV) shall have cured, flame retardant epoxy polymer coating meeting UL94V-0 requirements.
- H. Electromagnetic Interference (EMI) filtration shall be incorporated into the unit to dampen unwanted signals from the protected side of the unit.
- I. Operating temperature shall be -40 to +70°C.
- J. Screw terminals shall be provided for all wiring.
- K. Maximum continuous operating VAC shall be 115% of rated line voltage.

TAG
SPD-3

SERVICE
Control Power Surge Protection Device

6.08 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.

TAG
CT

SERVICE
Pump Current Transformer

6.09 DUPLEX PUMP CONTROLLER: Provide a duplex controller to control two pumps that

includes the following control functions.

- A. OPERATORS AND INDICATORS (for each pump)
 - 1. Manual-Off-Automatic selector switch
 - 2. Green "Pump Running" pilot light
 - 3. Red "Pump Failure" pilot light
 - 4. Red "Pump Seal Failure" pilot light (If Required)
- B. A Pump NO. 1 LEAD – ALTERNATE – Pump NO. 2 LEAD sequence selector switch to select either pump as lead pump or to select that the motors alternate as lead pump on each call for cycle.
- C. Signal inputs for: stop, lead pump start, lag pump start and a high level alarm. The sensors shall be optically isolated and operate on 12VDC with a maximum current of 12mA for intrinsic safety.
- D. Pilot light indicators for each level control input, which includes Start and Stop levels and Running inputs for each pump along with a high-level alarm.
- E. A field adjustable failure time delay for each pump, in the range of five (5) seconds to six and a half (6½) minutes, to start the lag pump at the lead pump start point if the lead pump fails or if the lead pump selector switch is placed in the off position. If a pump fails, the remaining functional pump shall remain the lead pump on future cycles. The failed pump shall only be called to operate at the lag pump operating point. Normal pump alternation shall resume when failure condition is corrected and pump 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 pump in the automatic mode after power failure or during initial startup.
- H. Pump failure, pump seal failure, and high-level alarm red pilot lights shall flash when activated.
- I. Provide pump running, pump failure and seal failure alarm contacts for each pump. In addition, provide a high-level alarm contact.
- J. Manual override inputs for each pump, which can be used to manually override the duplex controls', pump outputs when the controls are in the Auto mode. Inputs shall be provided to start or stop each pump 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 High-level alarm shall not be included in the improper sequence test.
- L. Provide automatic pump alternation on seal failure when a seal failure condition is detected and the motors are in the automatic mode. The failed pump shall be made the lag pump 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.

TAG
DC5-6

SERVICE
Emergency Pumps Controller

6.10 DUPLEX ALARM TELEMETRY OPTION: Provide an Alarm Telemetry system for the Duplex Controller, which provides auxiliary normally open relay contact outputs for the following duplex controller alarms: auxiliary alarm, improper sequence, Motor 1 Failure, Motor 2 Failure, Motor 1 Seal Failure, Motor 2 Seal Failure and High Level. Provide the following features for the DCAT system.

- A. The control circuitry shall be solid-state and contain an integral power supply with proper surge and over-current protection.
- B. Provide an individual Normally Open, Dry-Contact output for each alarm that has a contact rating of 5 Amps @ 120 VAC, resistive.
- C. Provide individual LED indicators for each output relay to show when each relay is energized.

TAG
DCAT5-6

SERVICE
Emergency Pumps Alarm Telemetry Module

6.11 DIGITAL TIME CLOCK: Provide a 24-Hour/7-Day electronic time clock (switch) with Liquid Crystal Display (LCD). Time clock shall have 24-Hour/7-Day programming, 7 ON and 7 OFF setpoint programs, and 5 preset block programs to allow a selection of any combination of days for different weekday schedules. The LCD shall display time of day in AM/PM format. A Daylight Saving Time adjustment button shall also be provided. The time switch will be programmable to-the-minute and also offer a manual override for temporary ON or OFF to the next scheduled event. The LCD shall provide load status indication. The SPDT relay output will be rated for 15A General Use @277 VAC. For carryover, the timer module shall have a rechargeable battery

with 2500 hour reserve carryover.

TAG
TC

SERVICE
Digital Time Clock

- 6.12 LEVEL METER/CONTROLLER: Provide an electronic, solid-state, proportional Level Meter/Controller that will accept a 2-wire transmitter or four (4) to twenty (20) mA signal. In addition, condition the signal to provide a valid basis for control and then perform ON/OFF or OPEN/CLOSE discrete dry type set point contact conditions based on the input value of the analog input signal. The Level Meter/Controller shall have the following features.
- A. Provided with a 3.5 digit LCD (or LED if required) readout meter in feet of water. The display shall be capable of being calibrated from the front of the unit and have a maximum display of 1999, with a decimal point that is user selectable.
 - B. The display zero indication shall be able to be offset anywhere within the range of the meter, with a minimum range of 60 counts.
 - C. Provide six (6) or twelve (12) separate setpoints each with discrete, isolated sealed SPDT relay output contacts.
 - D. Provide excitation voltage to drive a transducer/transmitter and condition its output signal to provide a continuous display of level.
 - E. The setpoints shall be field adjustable to operate on rising above or falling below the setpoint.
 - F. An LED indicator shall be provided for each setpoint to indicate when it is activated.
 - G. The actual setting of each setpoint shall be able to be displayed on the digital readout at any time.
 - H. The setting of each setpoint shall be adjustable throughout the complete signal range from the front of the meter/controller.
 - I. Provide a means of manually ramping the meter/controller, up and down, throughout its complete signal range, to test the operation of the setpoints.
 - J. The meter/controller shall come complete with a four (4) to twenty (20) mA, or a one (1) to five (5) volt DC output signal for additional monitoring and control devices.
 - K. Provide a signal failure relay option with two relays, to energize when the input signal goes above 20 mA or below 4 mA. The relays can energize on both high/low conditions or one can energize on high failure and the other on low failure. In addition, either relay may be set to 'flash' on and off during the

failure condition. This failure alarm shall also energize a front panel flashing LED alarm indicator.

- L. Provide a Lamp Test feature to test the digital display and individual LED setpoint indicators.

TAG
LMC-WW

SERVICE
Wetwell Level Meter/Controller

- 6.13 TELEMETRY LINE FILTER: Provide a telemetry line filter with a fast-acting design to protect data and communications equipment from transient voltage surges and induced voltages. The filter shall be a low-impedance, two-stage hybrid design with a first stage consisting of a heavy-duty energy handling gas discharge tube having a breakdown voltage rating between 200 and 350 volts. Impulse breakdown at 100 volts per microsecond shall equal 600 volts. A filter capacitor shall be connected across the lines, rated a 1kv. The second stage shall consist of two current limiting resistors, a fast-acting solid-state transient voltage surge absorber from each line to ground to protect each line up to a maximum continuous voltage of 30V AC or 38V DC with a 50 nanosecond response time. In addition, a separate bi-directional transient voltage surge absorber rated at 1500W @ 33V DC, which is connected across the two lines, for maximum protection. Integral wiring terminal blocks shall be included for both line and equipment sides of the filter. The filter shall be mountable directly on the panel backplate or be able to use track mounting if required.

TAG
LF-WW

SERVICE
Analog Signal Line Filter

- 6.14 SUBMERSIBLE PRESSURE/LEVEL TRANSMITTER: Provide a solid-state direct submersible level sensor and transducer designed as pressure sensor for continuous, hydrostatic level measurement in open containers/basins. Transmitter shall have a high resistance to overload and aggressive media with a ceramic diaphragm and enclosed in 316L stainless steel housing. The range of the transmitter shall be as required for the desired application with excitation voltage of 10 - 35V DC. Instrument cable shall be commercially available shielded instrument cable with a minimum of forty-five foot (45') cable length. The transmitter shall be capable of being supported by its own cable. The electronics shall be completely potted and provide a 4 - 20mA analog output to the level meter/controller. The accuracy shall be $\pm 0.2\%$ full scale. The transmitter shall be mounted near the bottom of the vessel with support bracket and be cable connected. Transmitter shall have Drinking water approvals: KTW, NSF, and ACS; and approvals by: ATEX, FM, and CSA.

- A. Application: Type of pressure: Relative Pressure, Liquids
- B. Operating Voltage: 10-30 V DC

C.	Electrical Design:	DC
D.	Output Function:	4-20 mA analog
E.	Measuring Range:	0 – 0.6 bar (0 – 8.70 psi)
F.	Pressure Rating:	4 bar (58 psi)
G.	Bursting Pressure Min.:	4.8 bar (69.62 psi)
H.	Characteristics Deviation:	< 0.25 (BFSL) / 0.5 *
I.	Connection:	PUR cable / 15 m
J.	Housing Materials:	Stainless Steel 316Ti / 1.4571; PA
K.	Medium Temperature:	-10 – 50 °C
L.	Ambient Temperature:	-10 – 50 °C
M.	Protection:	IP 68
N.	MTTF:	732 years

- | | <u>TAG</u> | <u>SERVICE</u> | <u>SCALE</u> |
|--|------------|---------------------------|--------------|
| | LT-WW | Wetwell Level Transmitter | 0-35 feet |
- 6.15 FLOAT SWITCHES: The float switch shall be a direct acting switch and contain a single pole mercury switch, which actuates when the longitudinal axis of the float is horizontal and de-actuates when the liquid level falls 1" below the actuation elevation. The float shall have a chemical resistant polypropylene casing with a firmly bonded electrical cable protruding. One end of the cable shall be permanently connected to the enclosed mercury switch and the entire assembly shall be capsulated to form a completely watertight and impact resistance unit.

- | | <u>TAG</u> | <u>SERVICE</u> |
|--|------------|-------------------------|
| | F | Float Switches (Qty. 8) |
- 6.16 TELEMETRY LINE FILTER: Provide a telemetry line filter with a fast-acting design to protect data and communications equipment from transient voltage surges and induced voltages. The filter shall be a low-impedance, two-stage hybrid design with a first stage consisting of a heavy-duty energy handling gas discharge tube having a breakdown voltage rating between 200 and 350 volts. Impulse breakdown at 100 volts per microsecond shall equal 600 volts. A filter capacitor shall be connected across the lines, rated a 1kv. The second stage shall consist of two current limiting resistors, a fast-acting solid-state transient voltage surge absorber from each line to ground to protect each line up to a maximum continuous voltage of 30V AC or 38V DC with a 50 nanosecond response time. In addition, a separate bi-directional

transient voltage surge absorber rated at 1500W @ 33V DC, which is connected across the two lines, for maximum protection. Integral wiring terminal blocks shall be included for both line and equipment sides of the filter. The filter shall be mountable directly on the panel backplate or be able to use track mounting if required.

TAG
LF

SERVICE
Analog Signal Line Filter

- 6.17 COMMON ALARM LIGHT: Alarm Light shall be RAB catalog number VBR100/GL100PGR or equal. Alarm light enclosure shall be constructed of die cast aluminum with a sturdy mounting bracket. Alarm light shall be suitable for wet location and comply with UL standard 1598, for hazardous locations where the lamp, socket and wiring require protection from rain, corrosive fumes, non-combustible dusts, moisture, non-explosive vapors and gases. The alarm light shall burn dim and steady during normal conditions to indicate electrical power "ON" and lamp good. During any alarm condition, the alarm light shall flash brightly. Alarm light mounted on the side of the enclosure or as directed by the project engineer.

TAG
AL

SERVICE
Common Alarm Light

END OF SECTION

PUBLIC UTILITIES

CABLE
COMCAST
2100 LINCOLN RD
HATTIESBURG, MS 39402
(601) 264-1188

POWER
PEARL RIVER VALLEY EPA
6803 US HWY 98
HATTIESBURG, MS 39402
(601) 264-2458

TELEPHONE
AT&T
P.O. BOX 1191
HATTIESBURG, MS 39401
(601) 545-6424

TELEPAK DBA CSPIRE FIBER
1018 HIGHLAND COLONY PKWY
SUITE 420
RIDGELAND, MS 39157

INLINE
405 LEGACY PARK
RIDGELAND, MS 39157
(601) 956-8909

CSPIRE
1000 HIGHLAND COLONY PKWY
SUITE 3001
RIDGELAND, MS 39157
(877) 276-8841

GAS
WILMUT GAS
P.O. BOX 1649
HATTIESBURG, MS 39403
(601)544-6001

SEWER
CITY OF HATTIESBURG
WATER & SEWER DEPT.
900 JAMES ST
HATTIESBURG, MS 39403
(601) 545-4530

WESTOVER WEST SEWAGE
P O BOX 16531
HATTIESBURG, MS 39404
(601) 298-0935

WATER
CITY OF HATTIESBURG
WATER & SEWER DEPT.
900 JAMES ST
HATTIESBURG, MS 39403
(601)545-4530

ARNOLD LINE WATER
ASSOC
4901 W 4TH ST
HATTIESBURG, MS 39402
(601)264-7111

TRAFFIC
CITY OF HATTIESBURG
TRAFFIC DEPT.
125 WALNUT ST
HATTIESBURG, MS 39401
(601)545-4626

CONSTRUCTION PLANS

FOR

COMPREHENSIVE SEWER
IMPROVEMENTS
CROSS CREEK PARKWAY
PUMP STATION
REHABILITATION

FOR THE

CITY OF HATTIESBURG

LAMAR COUNTY, MISSISSIPPI



Know what's below.
Call before you dig.

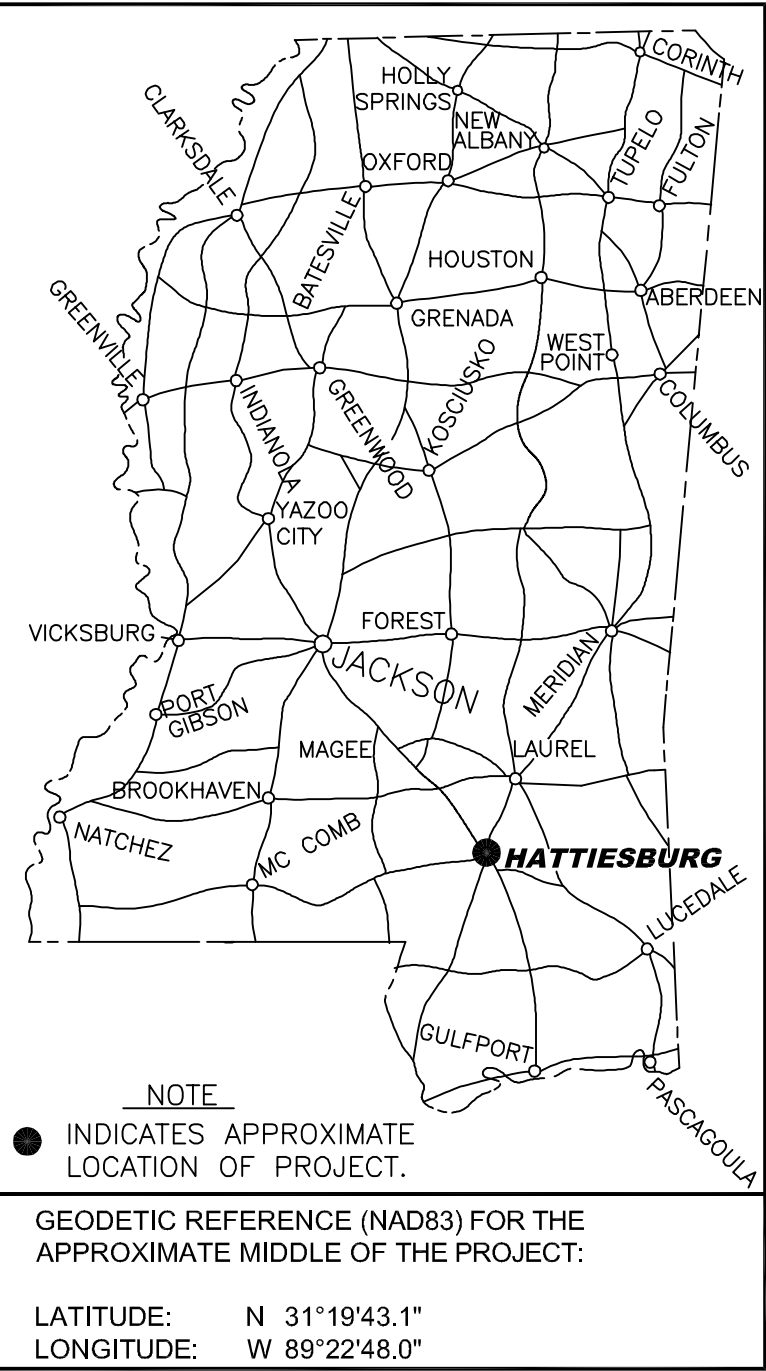
SPECIAL UTILITY NOTES:

1. UTILITY LOCATION REQUESTS WERE SUBMITTED TO MISSISSIPPI 811 (FORMERLY MISSISSIPPI ONE CALL) DURING THE FIELD DATA COLLECTION PHASE FOR THE DESIGN OF THIS PROJECT. ALL UTILITIES THAT LOCATED DURING THE FIELD DATA COLLECTION ARE SHOWN ON THESE PLANS. ALL CONFLICTS WITH EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE COORDINATED WITH THE UTILITY OWNER, THE ENGINEER AND THE PROJECT OWNER PRIOR TO INSTALLATION OF THE PROPOSED SEWER STRUCTURES AND PIPE. (NO SEPARATE PAY FOR COORDINATION)
2. THE CONTRACTOR SHALL DOCUMENT THE EXISTENCE OF ANY MISSING AND/OR OVERLAPPING UNDERGROUND UTILITIES AND STORM DRAINAGE NOT SHOWN ON THESE CONSTRUCTION DRAWINGS.

MISSISSIPPI 811 TICKETS	
TICKET NUMBER	SHEET
17060716071422	CROSS CREEK PARKWAY
17060716211441	NORTH OF TURTLE CREEK MALL B/W CROSS CREEK PRWY & WEATHERSBY RD

DECEMBER 2019

NO.	DATE	DESCRIPTION	BY



DETAILED INDEX	
SHEET No.	WRK No.
1	CVR
2	VM1
3	PSM1
4	GN1
5	PhP1
6	PNP2
7	PNP3
8	PNP4
9	PNP5
10	PNP6
11	PNP7
12	PNP8
13	PNP9
14	PNP10
15	PSP1
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17	SPS1
18	SPS2
19	SPS3
20	SSD1
21	TWD1
22	VS1
23	BLD1
24	CS-1
25	CS-2
26	E-0
27	E-1
28	E-2
29	E-3
30	E-4
31	E-5
32	E-6
6101	ECD-1
6102	ECD-2
6103	ECD-3
6185	CL-2
6191	CLG-1
6203	GR-1B
6213	GR-3A
6221	GR-HW
6351	TCP-1
6419	SD-1

MAYOR
Toby Barker

COUNCIL PERSONS
Carter Carroll, President
Mary Dryden, Vice President
Jeffrey George
Deborah Denard Delgado
Nicholas Brown

DIRECTOR OF ENGINEERING
Lamar Rutland, PE

PREPARED BY:

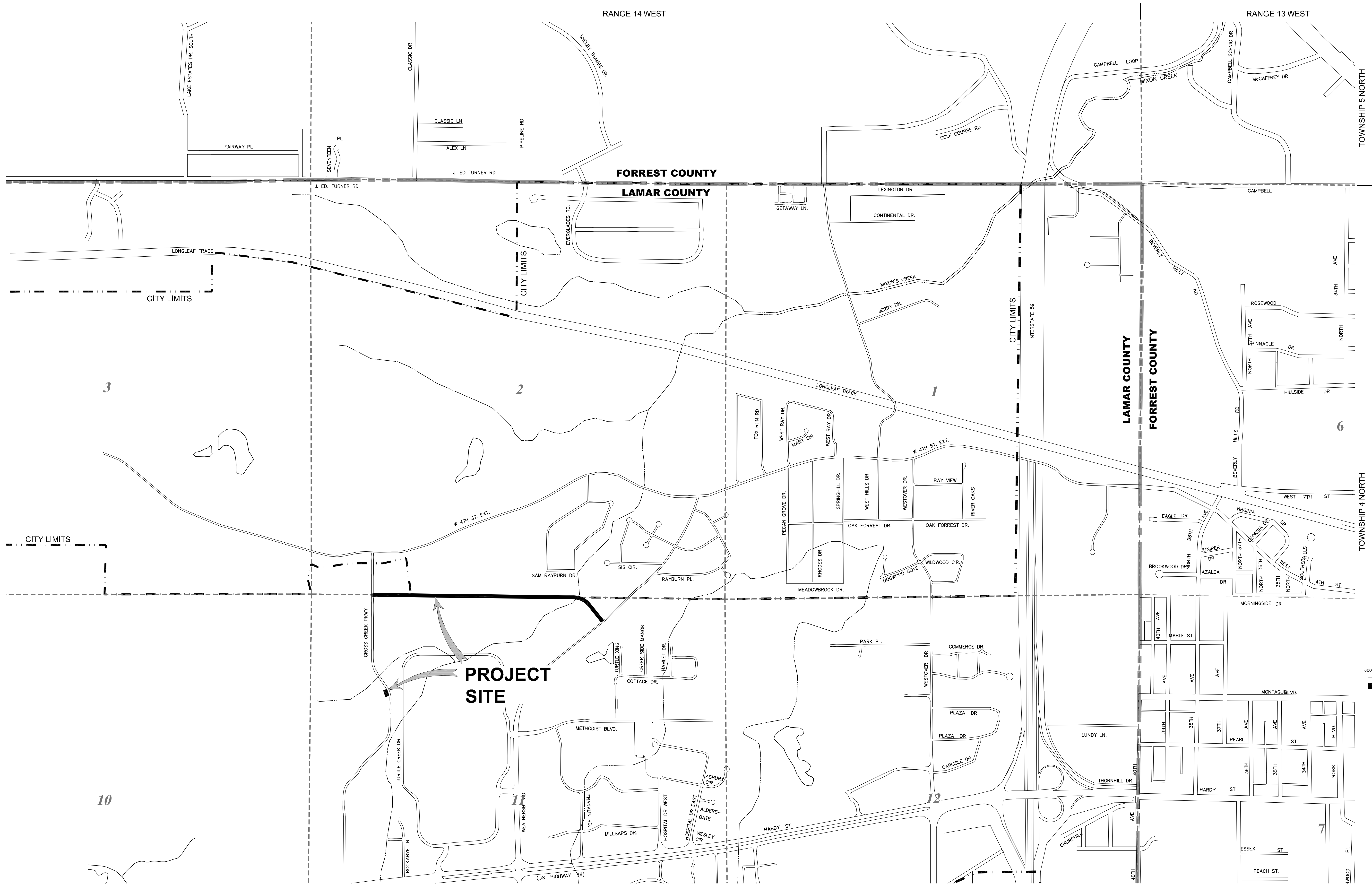
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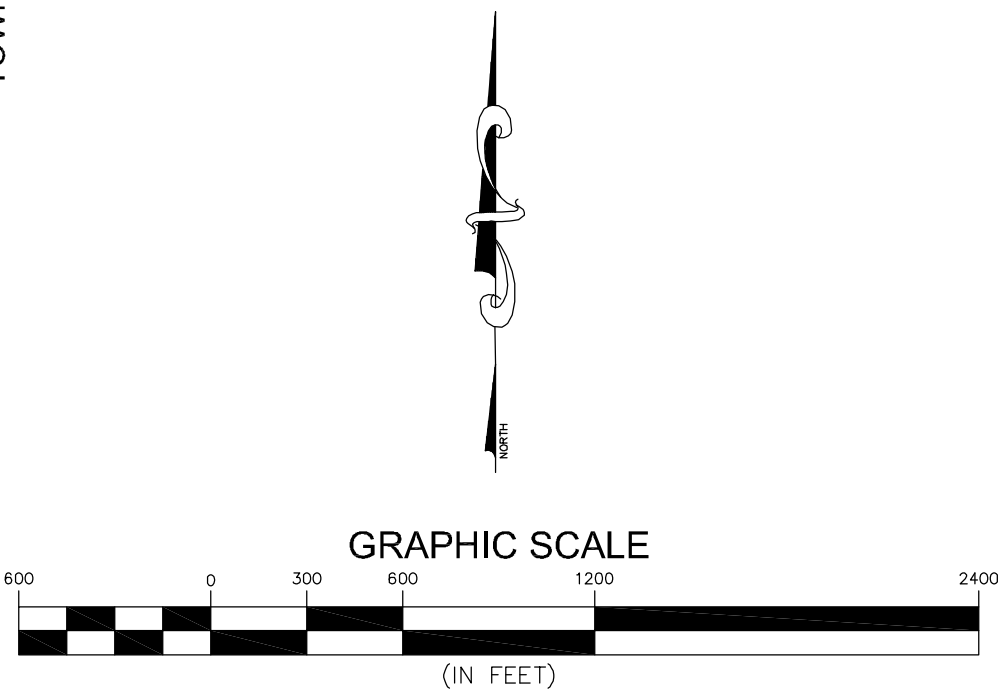
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Sheet No. 1
Drawing No.: 1273-S015



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VICINITY MAP



NO.	DATE	DESCRIPTION	BY

VICINITY MAP
CROSS CREEK PARKWAY PUMP STATION REHAB
CITY OF HATTIESBURG
LAMAR COUNTY, MISSISSIPPI

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

Drawn by: RES/SLS

Checked by: KDW

Scale: AS NOTED

Date: 12/16/2019

Working No. VM1

Drawing No.: 1273-S015

Sheet No. 2

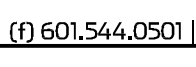
No.	DATE	DESCRIPTION			BY
PROJECT MAP					
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI					
 Engineering Progress					
301 Second Ave., Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com					
Drawn by: SLS		Checked by: KDW		Scale: AS SHOWN	
Date: 12/16/2019		Working No. _____ PSM1 _____			
Drawing No.: 1273-S015		Sheet No. _____ 3 _____			

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES.
2. THE CONTRACTOR SHALL KEEP A SET OF BLUE LINE PRINTS OF THE PROJECT ON THE JOB SITE SHOWING THE ACCURATE MEASUREMENTS AND ELEVATIONS OF THE "AS-BUILT" SYSTEM. THIS DATA WILL BE COLLECTED AND PUT ON THE DRAWINGS DAILY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE ENTIRE PROJECT.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CITY OF HATTIESBURG, LAMAR COUNTY, PRVEPA AND/OR SPIRE ENERGY FEES AND PERMITS ASSOCIATED WITH CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND THE LOCATION OF THE PROJECT. CONTROL COORDINATE SYSTEM AND ELEVATION CONTROL ARE SHOWN ON THE PLAN SHEETS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN SUB-SURFACE SOIL INVESTIGATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UTILITIES WITHIN THE WORK AREA.
8. ALL UNDERGROUND UTILITIES, FOR THE ENTIRE PROJECT, SHALL BE LOCATED BY THE CONTRACTOR AND UTILITY OWNERS PRIOR TO THE CONSTRUCTION OF THE PROJECT. ANY CONFLICTS SHALL BE COORDINATED BETWEEN CONTRACTOR, UTILITY OWNER AND ENGINEER.
9. ALL CULVERT CROSS DRAINS AND SIDE DRAINS SHALL BE PROTECTED. REMOVAL AND REPLACEMENT, IF REQUIRED SHALL BE PAID AS NOTED.
- 9.1. ANY EXISTING CROSS DRAIN SHOWN TO BE REMOVED AND REPLACED SHALL BE REPLACED WITH NEW RCP AND SHALL BE INSTALLED AT THE SAME GRADE AS THE EXISTING CROSS DRAIN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT THE GRADES OF THE REPLACED PIPE ARE CORRECT AND TO INSURE PROPER FLOW.
- 9.2. ANY EXISTING SIDE DRAINS THAT CONFLICT WITH CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH NEW CORRUGATED HDPE PIPE AND SHALL BE INSTALLED AT THE SAME GRADE AS THE EXISTING SIDE DRAIN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT THE GRADES OF THE REPLACED PIPE ARE CORRECT AND TO INSURE PROPER FLOW.
- 9.3. IF THE EXISTING DRAIN PIPES ARE CONNECTED TO INLETS, HEADWALLS OR ANY OTHER DRAINAGE STRUCTURES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTION TO THOSE STRUCTURES, UNLESS OTHERWISE NOTED. CONCRETE PIPE COLLARS SHALL BE USED AS WARRANTED, AS APPROVED BY THE ENGINEER.
- 9.4. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING STORM DRAINAGE STRUCTURES DURING THE CONSTRUCTION PROCESS. ANY DAMAGE, OTHER THAN THAT NOTED ABOVE, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
10. PROPER MAINTENANCE OF STREETS, INCLUDING DUST CONTROL, SHALL BE STRICTLY ADHERED TO.
11. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION).
12. THE CONTRACTOR SHALL PROVIDE PROPER TRAFFIC CONTROL SIGNS AND FLAGGERS TO MAINTAIN ONE LANE TRAFFIC DURING CONSTRUCTION, WHERE LANE CLOSURES ARE NEEDED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SEE SHEET NO. 250 FOR TYPICAL LANE CLOSURE DETAILS. ANY ROAD CLOSURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO IMPLEMENTATION.
13. ALL DISTURBED AREAS SHALL BE FERTILIZED AND SEEDED ACCORDING TO THE VEGETATION SCHEDULE IN THESE PLANS, UNLESS OTHERWISE NOTED.
14. ALL EXISTING MAILBOXES, STREET SIGNS, FENCES, AND OTHER STRUCTURES LOCATED WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED AND RESET AS DICTATED BY CONSTRUCTION ACTIVITIES. (NO SEPARATE PAY, UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER). EXISTING FLOWER BEDS, GARDENS, SHRUBS, ETC. WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED AND RESET AS DICTATED BY CONSTRUCTION ACTIVITIES. (NO SEPARATE PAY, UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER). ALL ITEMS (INCLUDING REMOVAL OF OBSTRUCTIONS, REMOVED AND RESET AND/OR REPLACEMENT OF STORM DRAIN STRUCTURES, ETC.) FOR WHICH NO PAY ITEM IS LISTED, SHALL BE INCLUDED IN THE COST OF THE PIPING LAYING OPERATION. (NO SEPARATE PAY).
15. PAVED ROADS SHALL BE OPEN CUT REPAIRED AS DETAILED. CASING SHALL BE USED ONLY WHERE NOTED ON THE PLANS.
16. ALL GRAVEL ROADS AND GRAVEL DRIVEWAYS SHALL BE OPEN CUT WITHOUT CASING, UNLESS OTHERWISE NOTED, AND REPLACED IN KIND.
17. ALL PAVED DRIVEWAYS SHALL BE OPEN CUT AND REPAIRED IN KIND, UNLESS OTHERWISE NOTED.
18. CONTRACTOR SHALL PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL DRIVEWAY CUTS AND EXCAVATION WITH THE OWNERS OF SAID DRIVEWAYS.
19. ANY DAMAGE TO PAVED ROADS OR DRIVEWAYS, WHICH ARE OUTSIDE OF THE PROJECT LIMITS, SHALL BE REPAIRED IN KIND, AT THE CONTRACTOR'S EXPENSE.
20. ALL TRENCHES IN PAVED AREAS SHALL BE REPAIR AS DETAILED. CRUSHED AGGREGATE SHALL ALSO BE INSTALLED AND USED FOR A TEMPORARY SURFACE UNTIL SUCH TIME THAT THE OWNER DECIDES TO ALLOW INSTALLATION OF PAVEMENT (SEE DETAIL). ALL CRUSHED AGGREGATE MAY BE LESTONE OR CONCRETE AND SHALL BE SIZE 825. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF EXISTING PAVEMENT PRIOR TO PLACEMENT OF PAVEMENT IN PATCHED AREAS TO MAKE A SMOOTH JOINT WITH THE EXISTING PAVEMENT. SAW CUT TO FULL DEPTH OF EXISTING PAVEMENT SHALL BE REQUIRED ON ALL PAVEMENT REPAIR, UNLESS OTHERWISE DIRECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SURFACE IN AN ACCEPTABLE CONDITION UNTIL SUCH TIME AS FINAL PAVEMENT IS INSTALLED.
21. ALL ROAD BORES SHALL BE IN ACCORDANCE TO THE DETAILS.
22. ALL SELECT FILL MATERIAL SHALL MEET THE SPECIFICATIONS FOR CLASS 9, GROUP C AND MODIFIED FOR TO CONSIST OF A PLASTICITY INDEX (PI) BETWEEN 5 AND 15. THE SELECT FILL MATERIAL SHALL BE INSTALLED AT THE DIRECTION OF THE ENGINEER OR HIS REPRESENTATIVE.
23. PRIOR TO THE BEGINNING OF ANY EXCAVATION, ALL EXISTING PAVEMENT SHALL BE SCORED OR SAW CUT TO A DEPTH SUCH THAT A STRAIGHT AND UNIFORM VERTICAL EDGE IS ESTABLISHED PRIOR TO REMOVAL OF SAID PAVEMENT FROM THE PROJECT. IF VERTICAL EDGE IS DISTURBED, THEN A SECOND CUT SHALL BE REQUIRED PRIOR TO ASPHALT OR CONCRETE PATCHING. ALL ASPHALT OR CONCRETE SHALL BE REMOVED FROM THE PROJECT SITE PRIOR TO EXCAVATION PROCEDURES. (NO SEPARATE PAY FOR SAW CUTTING, DEBRIS REMOVAL, PAVEMENT REMOVAL AND DISPOSAL)
24. WORK FOR THIS PROJECT REQUIRES EXCAVATION IN THE IMMEDIATE VICINITY OF TRAFFIC AND ADJACENT PROPERTIES. THEREFORE, THE RISK OF FAILURE OCCURRING DURING THE EXCAVATION REQUIRES THAT EXTREME CAUTION BE EXERCISED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING WHAT BRACING, SHORING OR GROUND SUPPORT SYSTEM THAT IS DEEMED NECESSARY TO PREVENT A FAILURE AND PROTECT THE PERSONS WORKING NEAR THE EXCAVATION, THE PUBLIC THAT MAY BE ABOVE THE EXCAVATION, OR ANY STRUCTURE ADJACENT TO THE EXCAVATION. ALL COSTS FOR ANY PROTECTIVE MEASURES INCLUDING THE MATERIALS AND LABOR FOR DESIGNING, DRAWING AND CONSTRUCTING THE FACILITY SHALL BE INCLUDED IN THE BID PRICE FOR CONTRACT ITEMS.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING BRACING, SHORING OR ANY GROUND SUPPORT SYSTEM REQUIRED TO PREVENT A FAILURE FROM OCCURRING DURING EXCAVATION. ALL COST FOR ANY PROTECTIVE MEASURES, INCLUDING THE MATERIALS AND LABOR FOR DESIGNING AND CONSTRUCTING THE SUPPORT SYSTEM, SHALL BE INCLUDED IN THE BID PRICE FOR CONTRACT ITEMS.
26. THE EROSION CONTROL DEVICES SHALL BE REQUIRED AS DIRECTED BY THE ENGINEER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT SILT DOES NOT LEAVE THE CONSTRUCTION SITE OR CONTAMINATE WATERS OF THE U.S. DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THE PLAN DURING CONSTRUCTION UNTIL PERMANENT GRASS IS ESTABLISHED OR THE DISTURBED SURFACED IS PAVED.
27. THE CONTRACTOR SHALL ADHERE TO ALL MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY REQUIREMENTS FOR EROSION CONTROL AND ANY OTHER PERTINENT GUIDELINES.
28. THE CONTRACTOR SHALL HAVE A COMPETENT AND EXPERIENCED SUPERINTENDENT ON SITE AT ALL TIMES. THE SUPERINTENDENT SHALL NOT OPERATE EQUIPMENT WHILE ON THE PROJECT SITE. WORK ON THE PROJECT SHALL STOP IF THE ASSIGNED PROJECT SUPERINTENDENT IS NOT ON SITE.

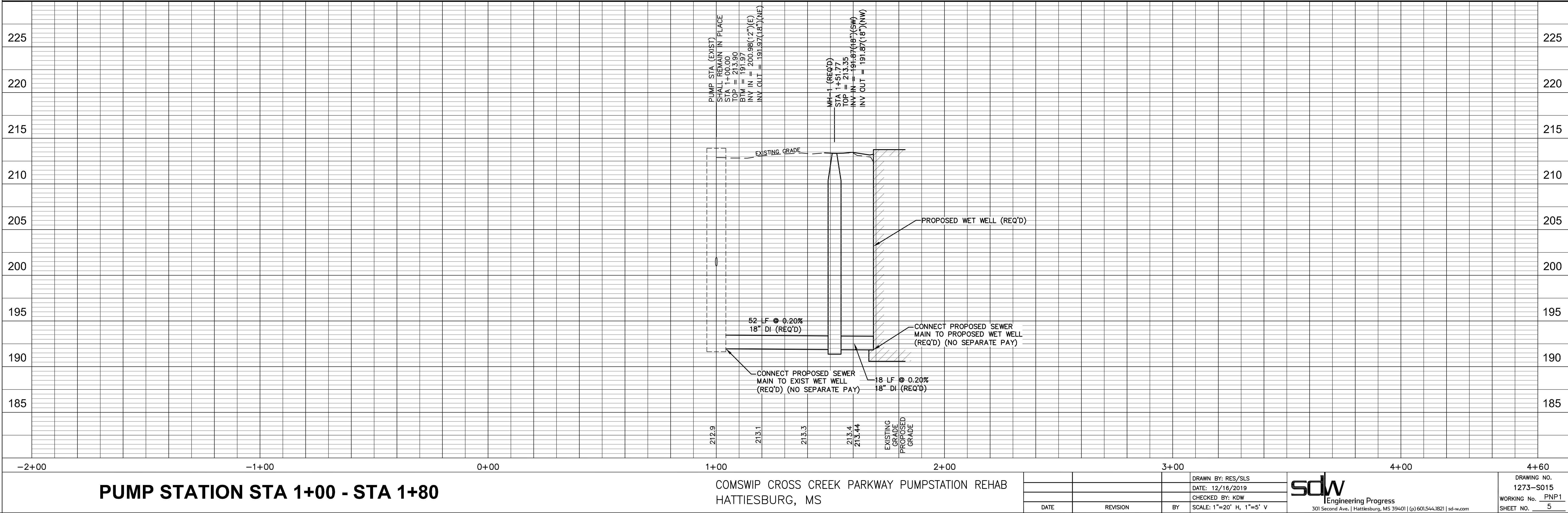
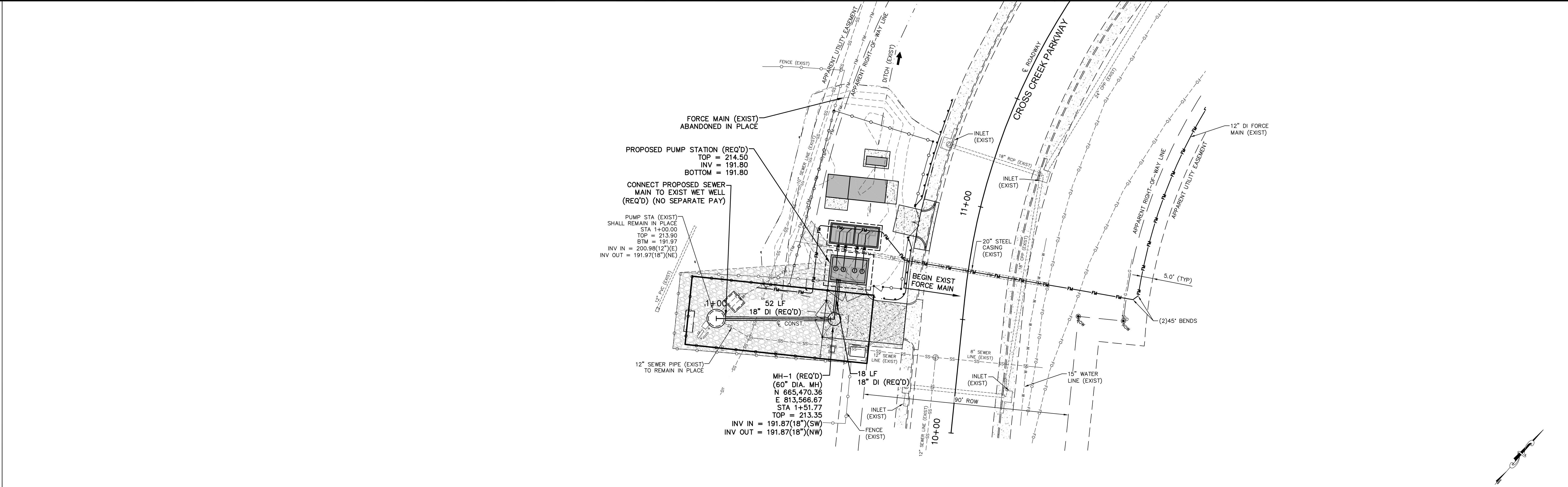
1. NO PIPE SHALL BE LAID IN THE PRESENCE OF WATER. NO MANHOLE OR WET WELL SHALL BE SET IN THE PRESENCE OF WATER.
2. WELL POINTS, IF REQUIRED, SHALL BE INCLUDED IN THE COST OF THE PIPING LAYING OPERATION.
3. WHERE THE WATER MAIN IS WITHIN 10 FEET OF A SEWER MAIN HORIZONTALLY, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18" FROM THE TOP OF THE SEWER MAIN, UNLESS OTHERWISE NOTED.
4. THE FINISHED ELEVATION OF ALL MANHOLE TOPS FOR MANHOLES TO BE CONSTRUCTED IN PAVED AREAS SHALL BE AT EXISTING PAVEMENT ELEVATION OR AS DIRECTED BY THE ENGINEER. MANHOLE AND PIPE ELEVATIONS SHALL BE TAKEN FROM CUT SHEETS FURNISHED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION. PAYMENT FOR SEWER WILL BE BASED ENTIRELY ON THE ENGINEER APPROVED CUT SHEETS.
5. THE COST OF CLEARING AND GRUBBING/REMOVAL AND DISPOSAL OF CLEARING AND GRUBBING MATERIAL SHALL BE PAID LUMP SUM, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE FAMILIAR WITH THE EXTENT OF CLEARING REQUIRED PRIOR TO BIDDING. OFFSITE DISPOSAL AREAS ARE TO BE FURNISHED BY THE CONTRACTOR.
6. MANHOLES, PUMP STATION WET WELLS AND VALVE PITS SHALL HAVE 20 MIL. COAL TAR EPOXY COATING ON THE INSIDE, UNLESS OTHERWISE NOTED. DUCTILE IRON PIPE SHALL BE LINED AS NOTED IN THE SPECIFICATIONS.
7. ALL SEWER MAINS, SERVICE LINES AND FITTINGS SHALL BE SDR 26 PVC AND OF THE SIZE AS NOTED IN THESE PLANS, UNLESS OTHERWISE NOTED. ALL FITTINGS REQUIRED FOR DUCTILE IRON OR PVC PIPE SHALL BE INCLUDED IN THE APPROPRIATE BID ITEM FOR THE PIPE AND AT NO ADDITIONAL COST TO THE PROJECT EXCEPT SERVICE TEE'S AND CLEANOUTS. CLEANOUTS SHALL INCLUDE TEE, SERVICE CAP, TRAFFIC COVER IF NEEDED, AND ANY PIPE LENGTH TO BRING CLEANOUT TO SURFACE GRADE. ALL CLEANOUTS LOCATED IN PAVED AREAS SHALL BE INSTALLED WITH A TRAFFIC LOAD RATED FRAME AND COVER SET FLUSH WITH PAVEMENT. (NO SEPARATE PAY)
8. ALL DUCTILE IRON PIPE SHALL BE LOCKING JOINT TYPE AND OF THE SIZE AS NOTED ON THESE PLANS.
9. INFILTRATION/EXFILTRATION AND MANDREL TEST WILL BE REQUIRED ON ALL SEWER MAIN INSTALLED. CONTRACTOR SHALL BE REQUIRED TO PULL A MANDREL FOR TESTING PURPOSES IN ALL SEWER LINES INSTALLED ON THE PROJECT PRIOR TO FINAL ACCEPTANCE. MANDREL TEST SHALL BE PERFORMED IN LIVE OR BYPASS PUMPED SEWER AS NECESSARY AT THE DISCRETION OF THE ENGINEER
10. ALL MANHOLES SHALL BE 48" IN DIAMETER, WITH ECCENTRIC TOP CONE SECTIONS, UNLESS OTHERWISE NOTED. (SEE PLAN AND PROFILE SHEETS FOR PROPER SIZING)
11. ALL SINGLE DROPS FOR SEWER PIPE 8" AND UNDER IN DIAMETER SHALL BE PLACED INSIDE THE MANHOLE AS DETAILED. ALL MULTIPLE DROPS OR DROPS FOR SEWER PIPE OVER 8" IN DIAMETER SHALL BE PLACED OUTSIDE OF THE MANHOLE AS DETAILED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
12. THE CONTRACTOR SHALL ADHERE TO ALL MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY REQUIREMENTS FOR SANITARY SEWER CONSTRUCTION CONTROL AND ANY OTHER PERTINENT GUIDELINES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BY-PASS PUMPING AS REQUIRED BY THE ENGINEER. (NO SEPARATE PAY)
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTING ANY SEWER SERVICE LINES WHICH ARE CUT AND/OR REMOVED DURING THIS PROJECT.
- 14.1. ALL SERVICE CONNECTIONS SHOWN ON THE PLAN SHEETS SHALL BE CONNECTED TO THE PROPOSED SEWER LINE, UNLESS NOTED OTHERWISE OR DIRECTED BY THE ENGINEER.
- 14.2. FLEXIBLE COUPLINGS SHALL BE USED ONLY WITH ENGINEER'S APPROVAL.
- 14.3. THE CONTRACTOR SHALL VERIFY THE LOCATION AND FLOWLINE ELEVATION OF THE SERVICE CONNECTION POINTS AT EACH STRUCTURE PRIOR TO CONSTRUCTION. LENGTH OF SERVICE CONNECTIONS MAY VARY FROM WHAT IS SHOWN DUE TO LOCATION OF SERVICE CONNECTION POINT.
- 14.4. THE MINIMUM GRADE FOR SEWER SERVICE CONNECTIONS SHALL BE 0.50% SERVICE CONNECTION TO MAIN, TEE'S, SERVICE LINES, REDUCERS, CONNECTIONS TO EXISTING SERVICE AND ANY OTHER NECESSARY FITTINGS SHALL BE PAID PER EACH CONNECTION.
- 14.5. CLEANOUTS SHALL BE PAID PER EACH. CLEANOUTS FOR SANITARY SEWER SERVICES SHALL BE PLACED AT THE RIGHT OF WAY LINE (AS DETAILED), AT EVERY TURN AND PLACED NO MORE THAN 75' OC, FOR LONG TANGENTS, UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.

1. ALL EXISTING MANHOLES NOTED TO BE REMOVED SHALL BE REMOVED ENTIRELY. REMOVED ITEMS SHALL BE DISPOSED OF APPROPRIATELY.
2. ALL EXISTING MANHOLES NOTED TO BE ABANDONED, SHALL BE PAID FOR PER EACH AND SHALL BE MODIFIED AS FOLLOWS:
 - 2.1. REMOVE AND DISPOSE OF SANITARY WASTE.
 - 2.2. REMOVE COVER, FRAME AND THE TOP 36" OF MANHOLE STRUCTURE. DISPOSE OF REMOVED OBJECTS APPROPRIATELY.
 - 2.3. FILL THE MANHOLE WITH SAND.
 - 2.4. CAP THE MANHOLE WITH 3000 PSI, NON-REINFORCED CONCRETE (6" DEPTH).
 - 2.5. BACKFILL WITH NATIVE SOIL MATERIAL AND/OR FILL MATERIAL (CL B9) AND COMPACT. GRADE TO DRAIN AS REQUIRED. GRASS DISTURBED AREA OR REPAIR PAVEMENT AREAS.
3. ALL EXISTING SEWER PIPES NOTED TO BE REMOVED, SHALL BE REMOVED ENTIRELY. (NO SEPARATE PAY)
4. ALL EXISTING SEWER PIPES NOTED TO BE ABANDONED SHALL BE PAID FOR BY LINEAR FOOT AND SHALL BE MODIFIED AS FOLLOWS:
 - 4.1. REMOVE AND DISPOSE OF SANITARY WASTE.
 - 4.2. FILL THE PIPE WITH FLOWABLE FILL.
 - 4.3. PLUG ENDS.
5. WHERE ABANDONED SEWER PIPES AND/OR MANHOLES CONFLICT WITH THE NEW CONSTRUCTION, THE EXISTING PIPE OR MANHOLE SHALL BE REMOVED, UNLESS NOTED OTHERWISE OR DIRECTED BY THE ENGINEER. REMOVED ITEMS SHALL BE PAID FOR UNDER THE APPROPRIATE ITEMS.

CONC	— CONCRETE		— POWER LINE (OVERHEAD)
CMP	— CORRUGATED METAL PIPE		— PROPERTY LINE
CPP	— CORRUGATED PLASTIC PIPE	RCAP	— REINFORCED CONCRETE ARCH PIPE
DI	— DUCTILE IRON	RCP	— REINFORCED CONCRETE PIPE
DBL	— DOUBLE	REQ'D	— REQUIRED
DS	— DOWN STREAM	RT	— RIGHT
EXIST	— EXISTING	ROW	— RIGHT OF WAY
FT	— FEET	○SSCO	— SANITARY SEWER CLEAN-OUT
	— FENCE LINE (ALL TYPES)		— SANITARY SEWER LINE
+FID	— FIBER OPTIC ID POST	⊙	— SEWER MANHOLE
	— FIBER OPTIC LINE	⊙SP	— SIGNAL POLE (EXIST)
FFE	— FINISHED FLOOR ELEVATION	SY	— SQUARE YARD(S)
	— FIRE HYDRANT	SDR	— STANDARD DIMENSION RATIO
FL	— FLOW LINE	STA	— STATION
	— FORCE MAIN (EXIST)	☆LP	— ST LIGHT ON POLE
GALV	— GALVANIZED		— TELEPHONE LINE (UNDERGROUND)
	— GAS LINE	Ⓣ	— TELEPHONE MANHOLE
	— GAS VALVE	□TP	— TELEPHONE PEDESTAL
GND	— GROUND	TYP	— TYPICAL
⚡	— GROUND LIGHT	US	— UP STREAM
+ GP	— GUARD POST	○PP	— UTILITY POLE
	— GUY WIRE		— WATER LINE
HDPE	— HIGH DENSITY POLYETHYLENE PIPE	□WM	— WATER METER
INV	— INVERT		— WATER VALVE
LT	— LEFT	W/	— WITH
LF	— LINEAR FEET		
MH	— MANHOLE		
PVC	— POLYVINYL CHLORIDE PIPE		

No.	DATE	DESCRIPTION		BY
GENERAL NOTES & LEGEND				
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI				
 Engineering Progress				
301 Second Ave., Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com				
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Date: 12/16/2019		Working No. GEN1		
Drawing No.: 1273-S015		Sheet No. 4		

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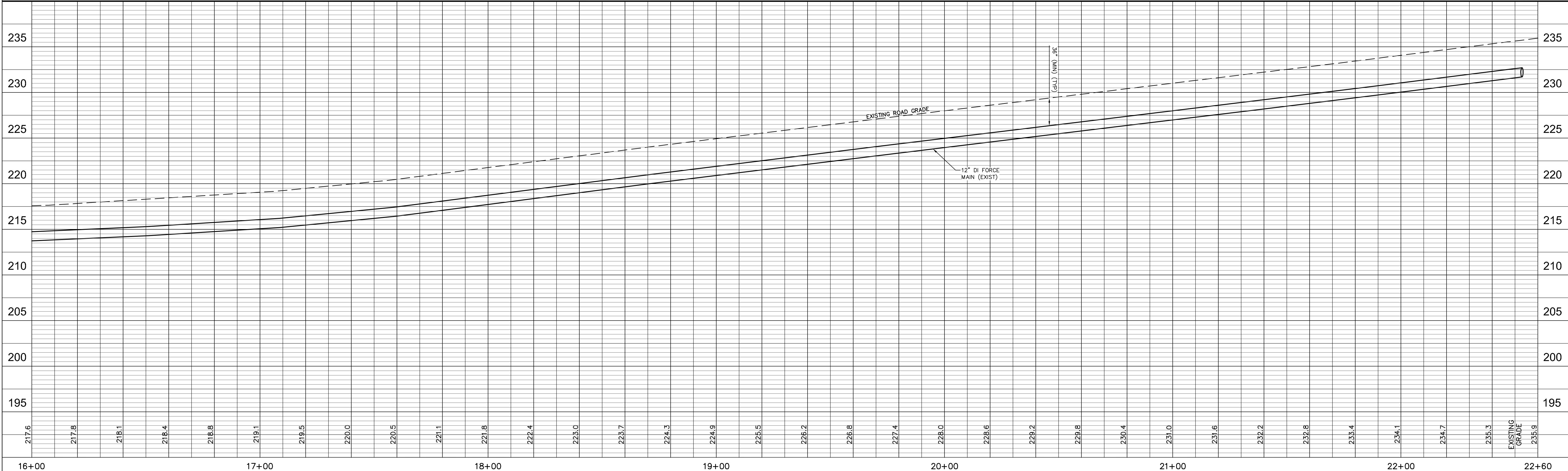
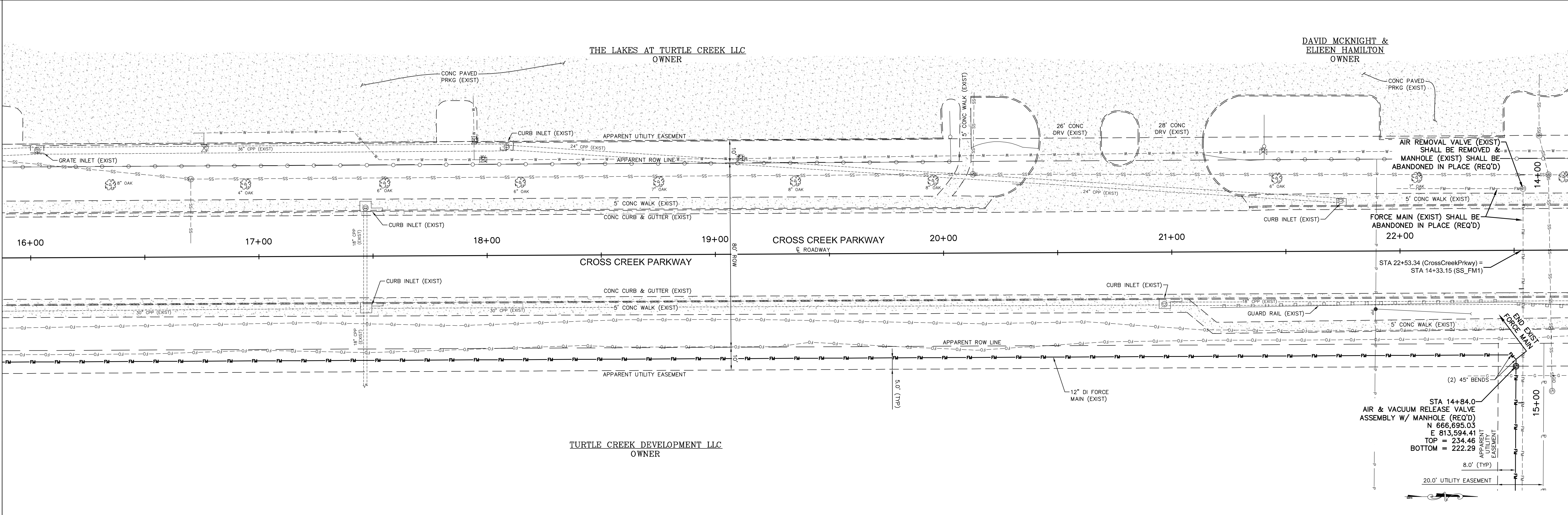
COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

			DRAWN BY: RES/SLS
			DATE: 12/16/2019
			CHECKED BY: KOW
DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V

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DRAWING NO. 1273-S015
WORKING No. PNP1
SHEET NO. 5

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CROSS CREEK PARKWAY STA 16+00 - STA 22+60

COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

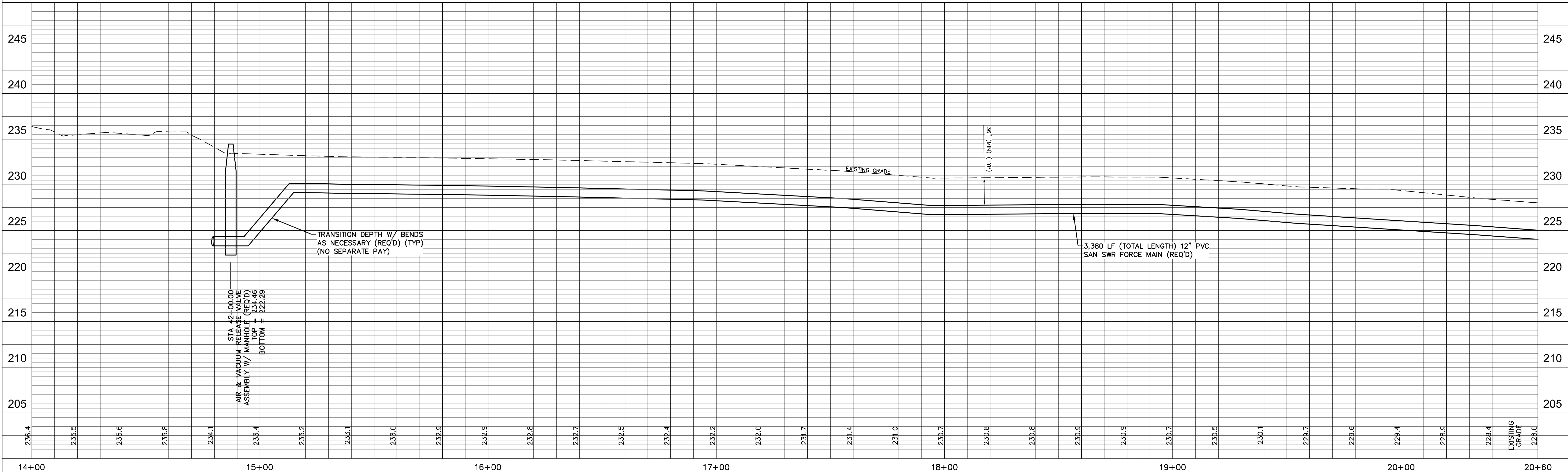
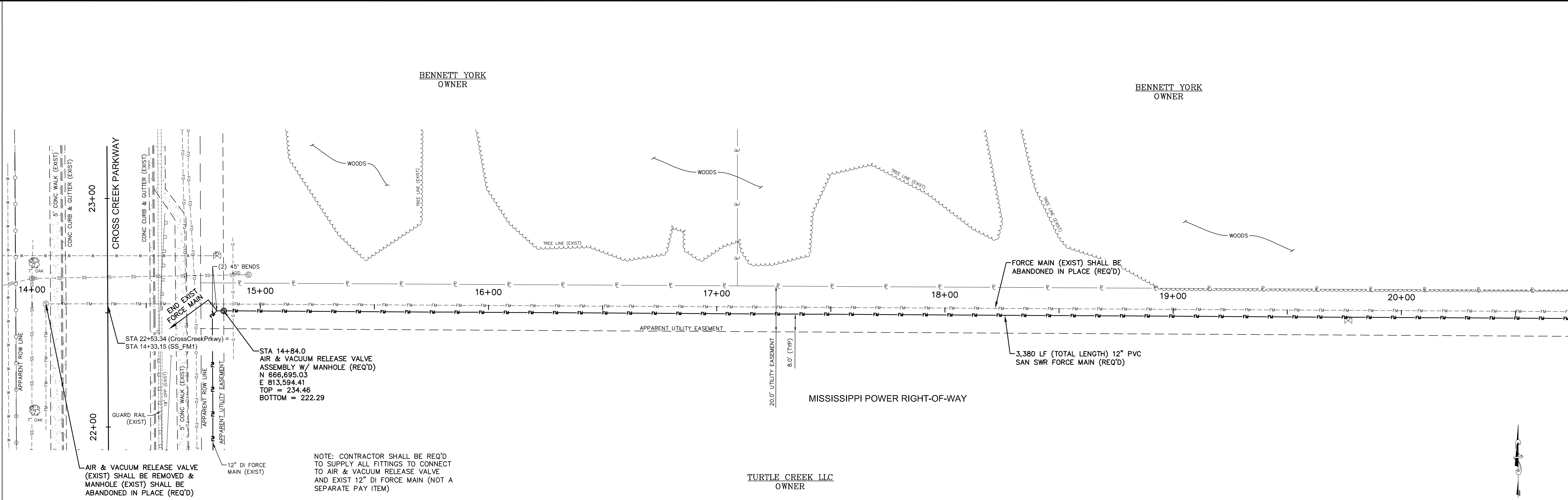
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			DATE: 12/16/2019
			CHECKED BY: KOW
DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V



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DRAWING NO.
1273-S015
WORKING No. PNP3
SHEET NO. 7

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SEWER FORCE MAIN STA 14+00 - STA 20+60

COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

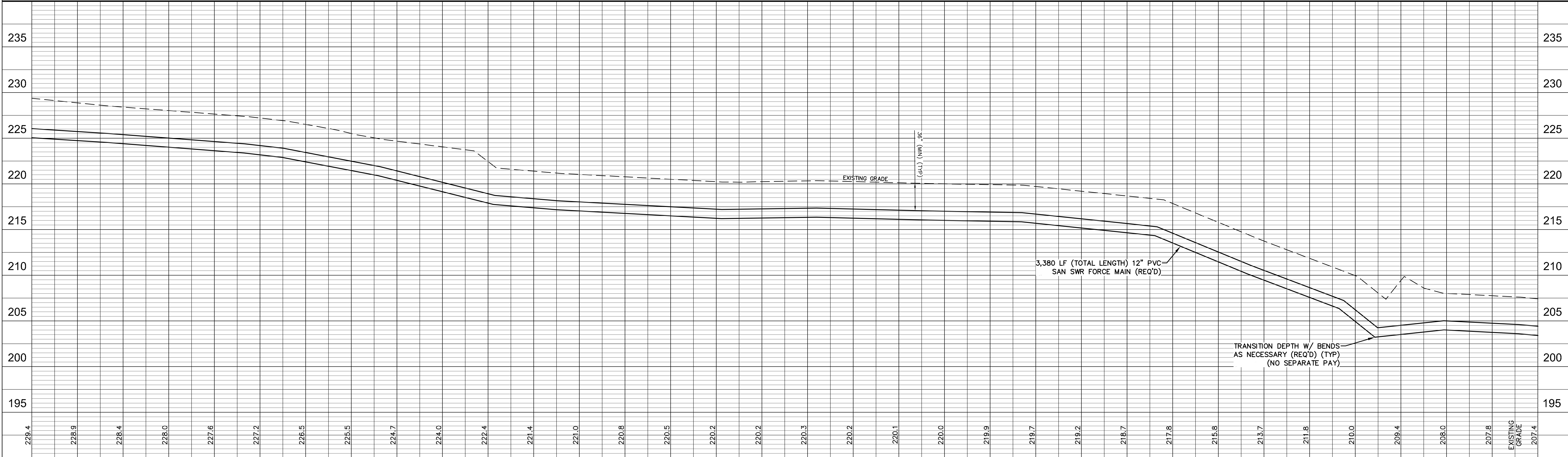
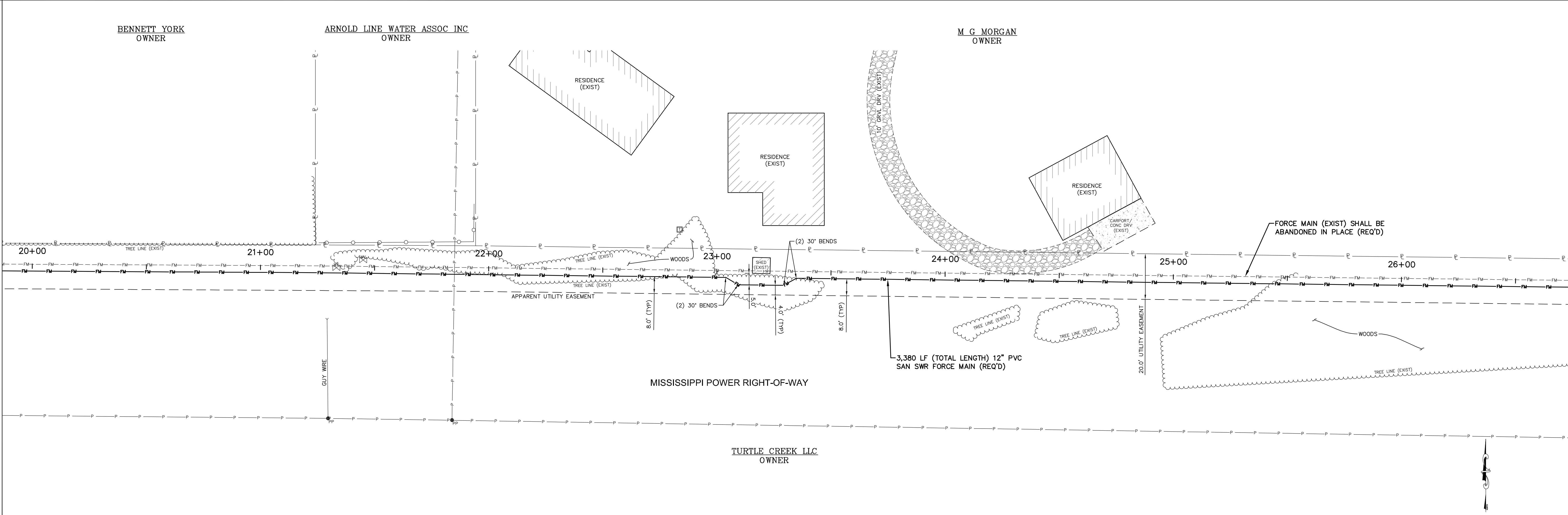
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DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V



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DRAWING NO.
1273-S015
WORKING No. PNP4
SHEET NO. 8

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SEWER FORCE MAIN STA 20+00 - STA 26+60

COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

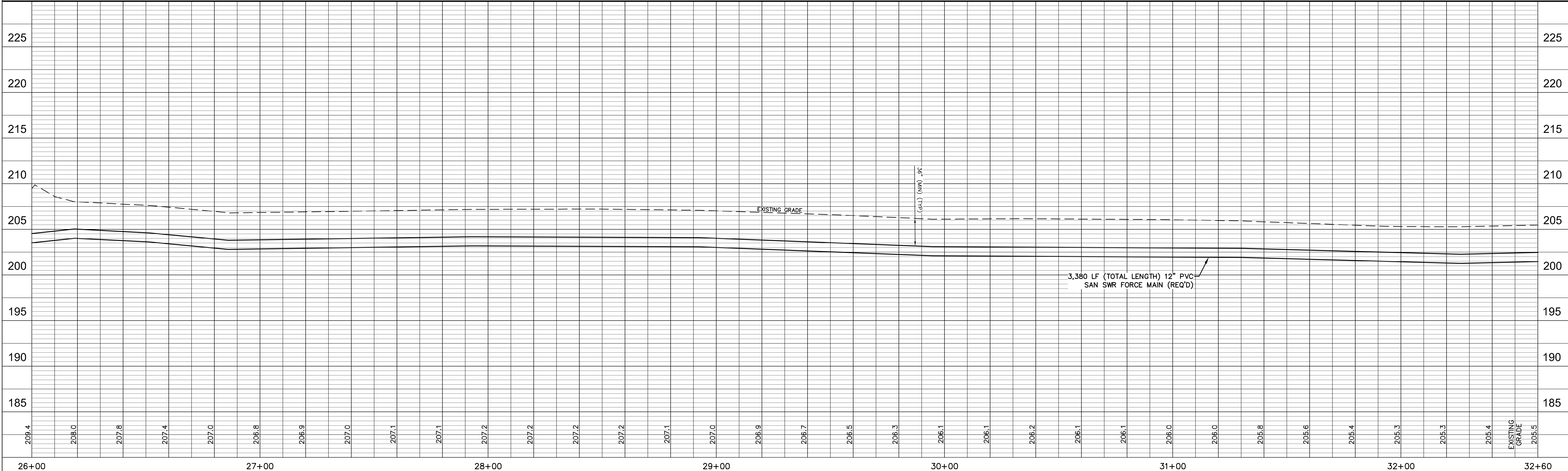
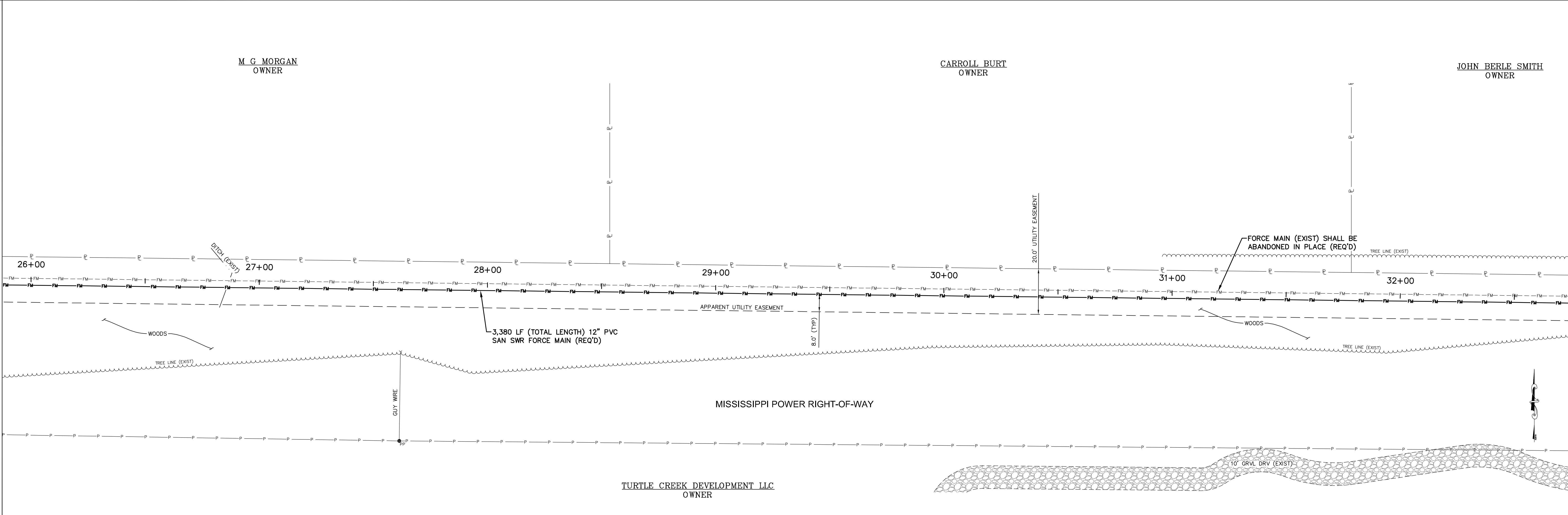
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DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V



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DRAWING NO. 1273-S015
WORKING No. PNP5
SHEET NO. 9

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SEWER FORCE MAIN STA 26+00 - STA 32+60

COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

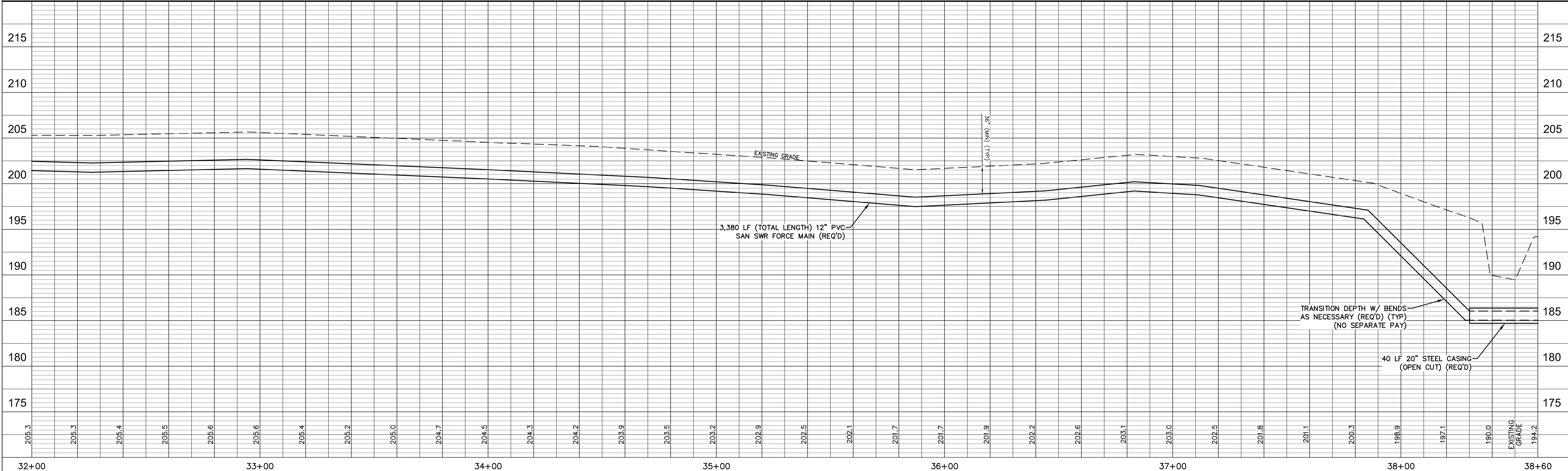
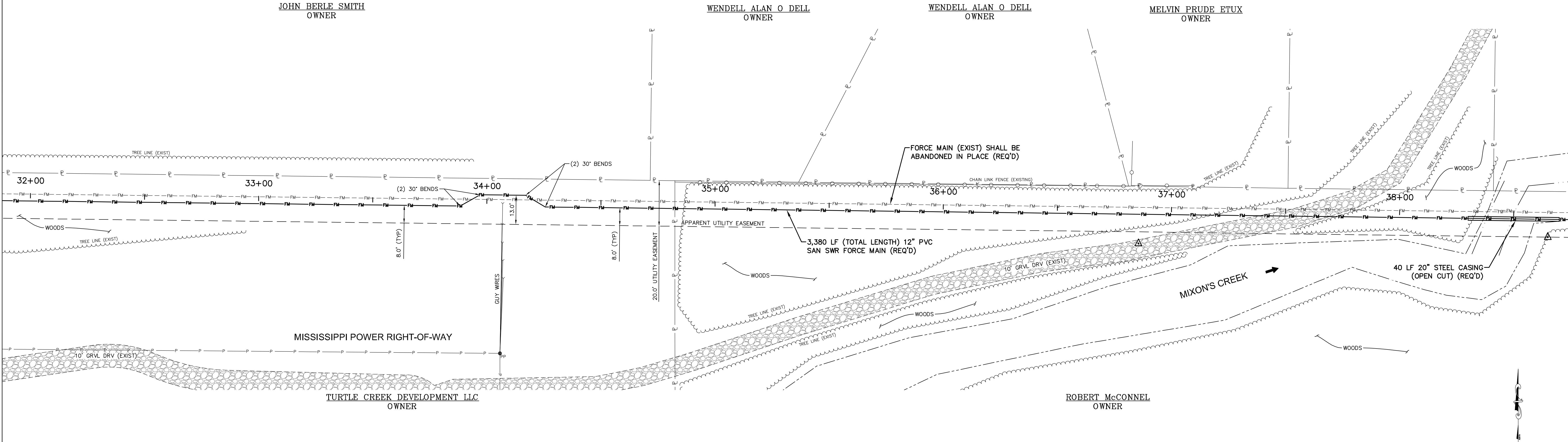
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DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V



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DRAWING NO.	1273-S015
WORKING No.	PNP6
SHEET NO.	10

CONTROL MONUMENT - 2
FLAGGED & GAUGED 80d MAG NAIL
N 855,860.34
E 815,795.83
15.01 FT RT STA. 36+85.71



SEWER FORCE MAIN STA 32+00 - STA 38+60

COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

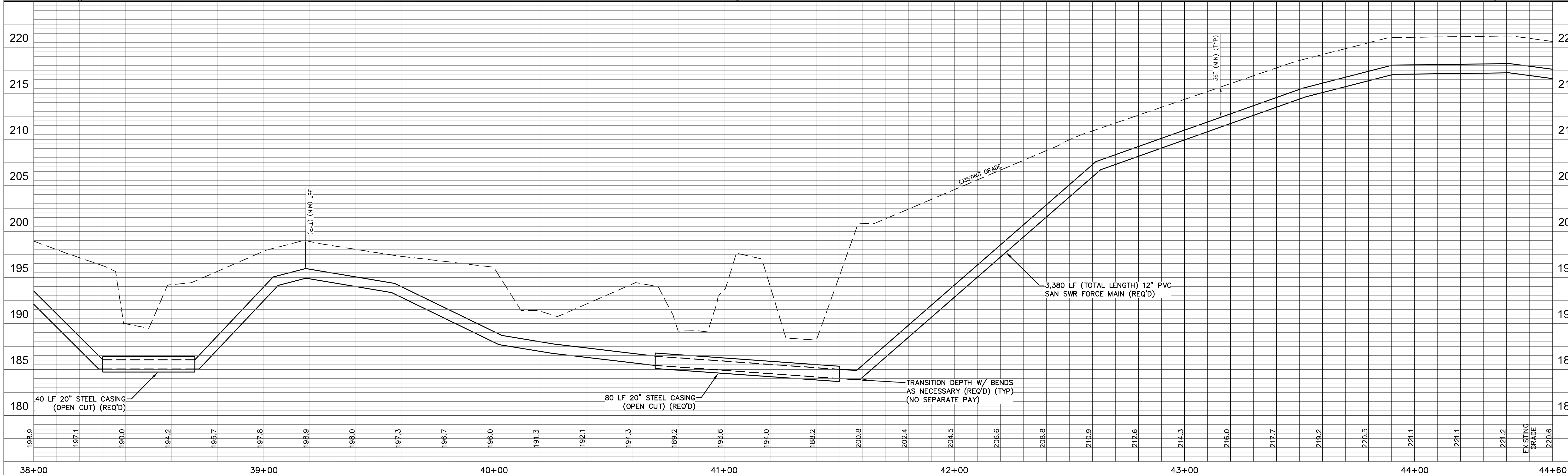
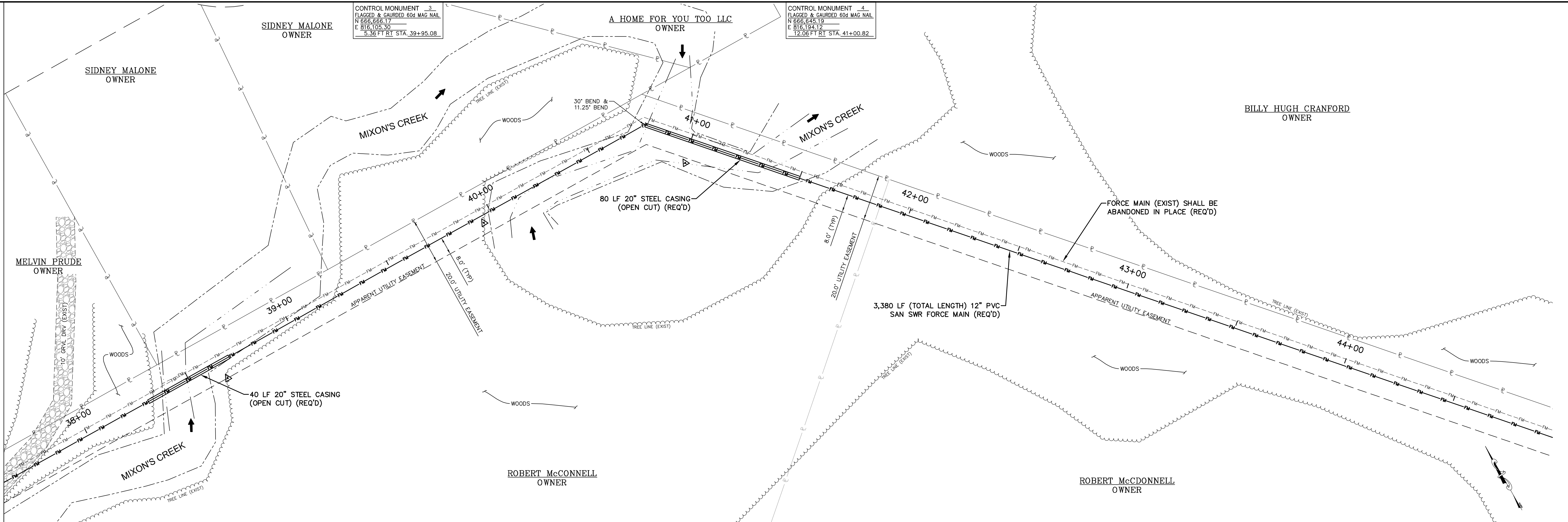
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DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V



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DRAWING NO. 1273-S015
WORKING No. PNP7
SHEET NO. 11

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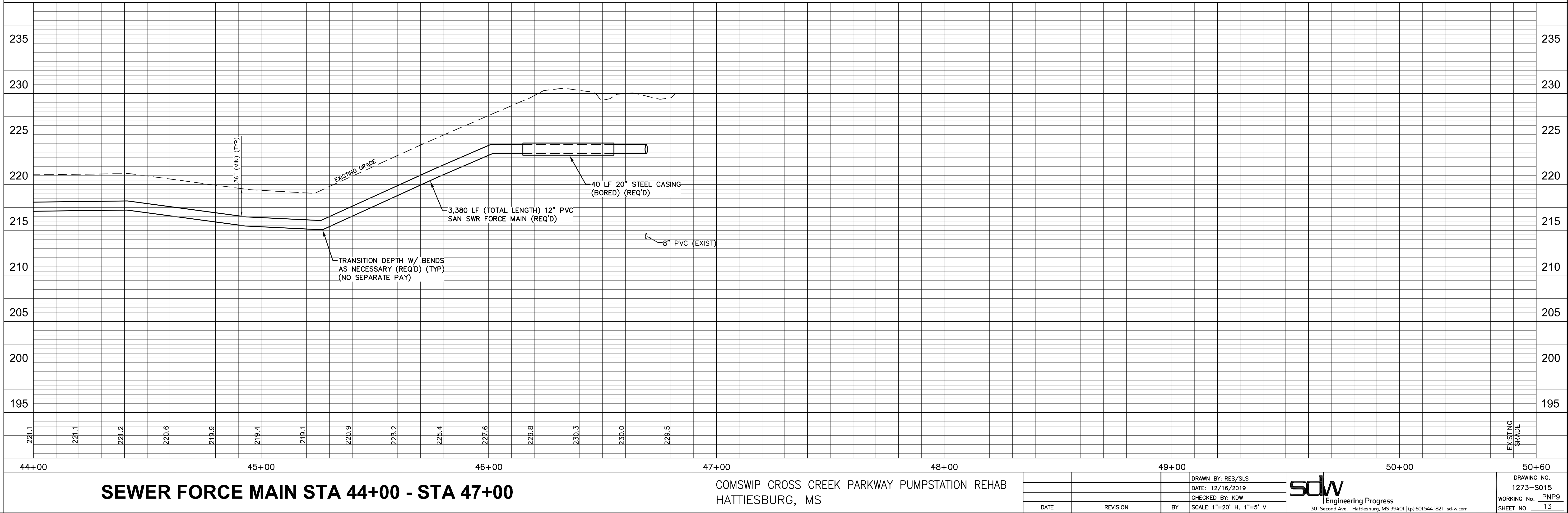
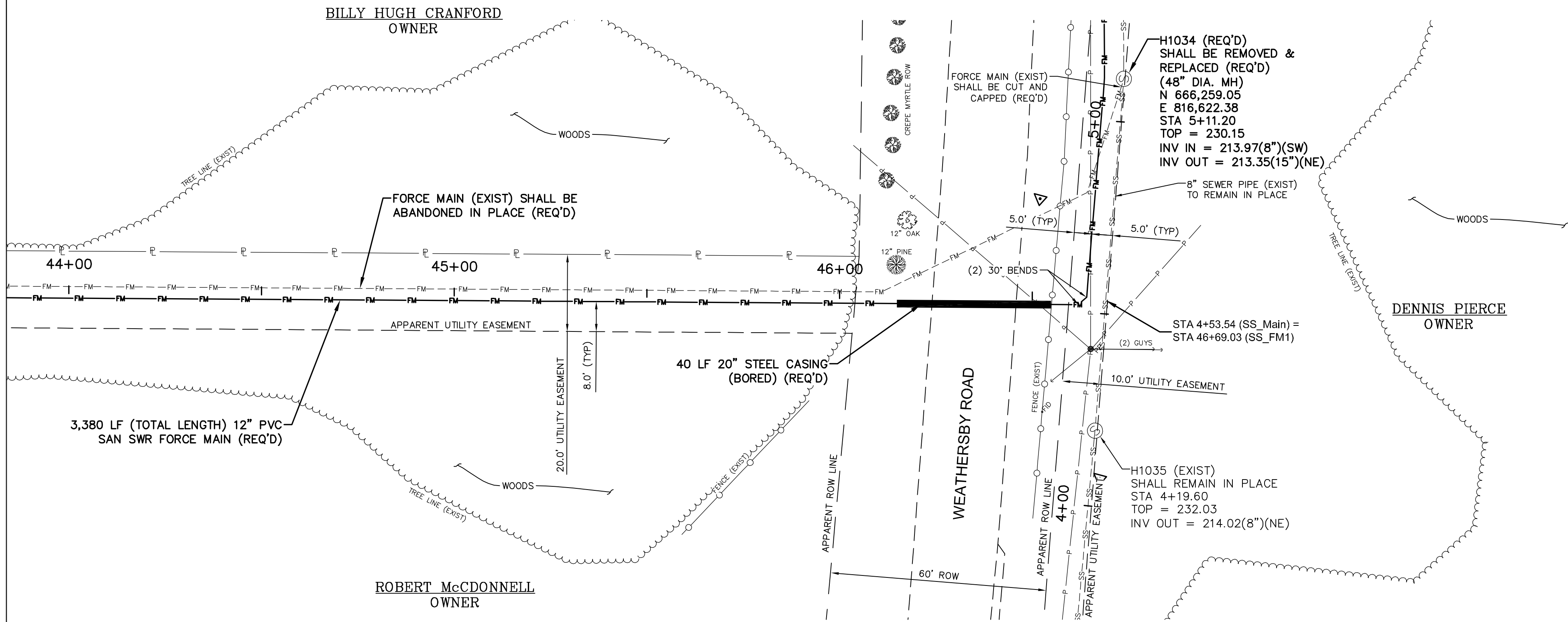
SEWER FORCE MAIN STA 38+00 - STA 44+60

COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

			DRAWN BY: RES/SLS	 Engineering Progress 301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 sd-w.com	DRAWING NO. 1273-S015
			DATE: 12/16/2019		WORKING No. <u>PN</u>
			CHECKED BY: KDW		SHEET NO. <u>12</u>
DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V		

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CONTROL MONUMENT - 5	CONTROL MONUMENT - 6
FLAGGED & GAUGED 60d MAG NAIL	FLAGGED & GAUGED 60d MAG NAIL
N 666,254.70	N 666,194.99
E 816,584.68	E 846,540.59
25.25 FT LT STA. 46+51.85	25.24 FT RT STA. 46+67.82



SEWER FORCE MAIN STA 44+00 - STA 47+00

COMSWIP CROSS CREEK PARKWAY PUMPSTATION REHAB
HATTIESBURG, MS

			DRAWN BY: RES/SLS
			DATE: 12/16/2019
			CHECKED BY: KOW
DATE	REVISION	BY	SCALE: 1"=20' H, 1"=5' V



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DRAWING NO.
1273-S015
WORKING No. PNP9
SHEET NO. 13

SEE SHEET No. 16
MATCH LINE A

296 LF CHAIN LINK FENCE SHALL
BE INSTALLED (6' TALL) (REQ'D)

GENERATOR PAD (REQ'D)
FFE = 213.35
18 LF 4" SEWER SERVICE,
@ 0.5% (MIN) (REQ'D)

SEWER CLEANOUT
(FL= 210.70) (REQ'D)

CONNECT WATER AND
SEWER SERVICES TO
BUILDING (REQ'D)

152 LF CHAIN LINK
FENCE (6' TALL)(REQ'D)

GAS SERVICE (REQ'D)
(SEE ELECTRIC PLAN)

BENDS

50 LF GUARD
RAIL (REQ'D)

CONSTRUCTION
DRIVEWAY (REQ'D)

REMOVE CONC
WALK & CURB
(17 SY) (REQ'D)

30 SY CONCRETE
DRIVE W/ APRON
(6" THICK) (REQ'D)

DBL LEAF CHAIN
LINK SWING GATE
(14' CLEAR)(REQ'D)

CROSS CREEK PARKWAY

CONTROL BUILDING (REQ'D)
FFE = 213.50
(SEE DETAILS)

160 LF SILT FENCE
ALONG TOE OF
GRADING (REQ'D)

76 LF IRON FENCE (EXIST)
SHALL BE REMOVED (REQ'D)

VALVE PIT (REQ'D)
(SEE DETAILS)
TOP = 214.40

CONNECT 4" "P" TRAP TO WET
WELL (FL= 207.50) (REQ'D)

FORCE MAIN (EXIST) SHALL BE
ABANDONED IN PLACE (REQ'D)

FORCE MAIN (EXIST) SHALL
BE REMOVED (REQ'D)

WET WELL (REQ'D)
(SEE DETAILS)
TOP = 214.50
BTM = 191.80
INV = 191.80

ELECTRICAL (REQ'D) (TYP)
(SEE ELECTRIC PLAN)

182 LF CHAIN LINK FENCE (EXIST)
SHALL BE REMOVED (REQ'D)

296 LF CHAIN LINK
FENCE (EXIST) SHALL
BE INSTALLED ON
PROPERTY LINE (REQ'D)

PUMP STA (EXIST) SHALL
REMAIN IN PLACE
TOP = 213.90
BTM = 191.97
INV. IN = 200.98(12" (E)
INV. OUT = 191.97(18" (NE)

LIGHT POLE (EXIST) SHALL
BE REMOVED (REQ'D)

PORTABLE BYPASS
PUMP (EXIST) SHALL
BE REMOVED (REQ'D)

GENERATOR
(EXIST) SHALL BE
REMOVED (REQ'D)
(SEE ELECTRICAL
SHEETS)

ELECTRIC BOX (EXIST)

ELECTRIC PANEL (EXIST)

ELECTRIC BOX (EXIST)

SWITCH BOX (EXIST)

SOME ITEMS SHALL
BE REMOVED (SEE
ELECTRICAL SHEETS)

182 LF CHAIN LINK FENCE (EXIST)
SHALL BE REMOVED (REQ'D)

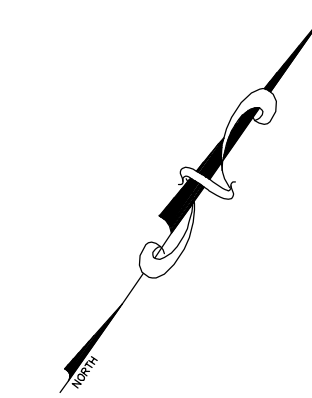
296 LF CHAIN LINK
FENCE (EXIST) SHALL
BE INSTALLED ON
PROPERTY LINE (REQ'D)

PAD MOUNT
TRANSFORMER

ELECTRIC SWITCH
GEAR (EXIST)

LEGEND:

- (220) — PROPOSED CONTOURS (1' INTERVALS)
- - - 219 - - - EXISTING CONTOURS (1' INTERVALS)



GRAPHIC SCALE

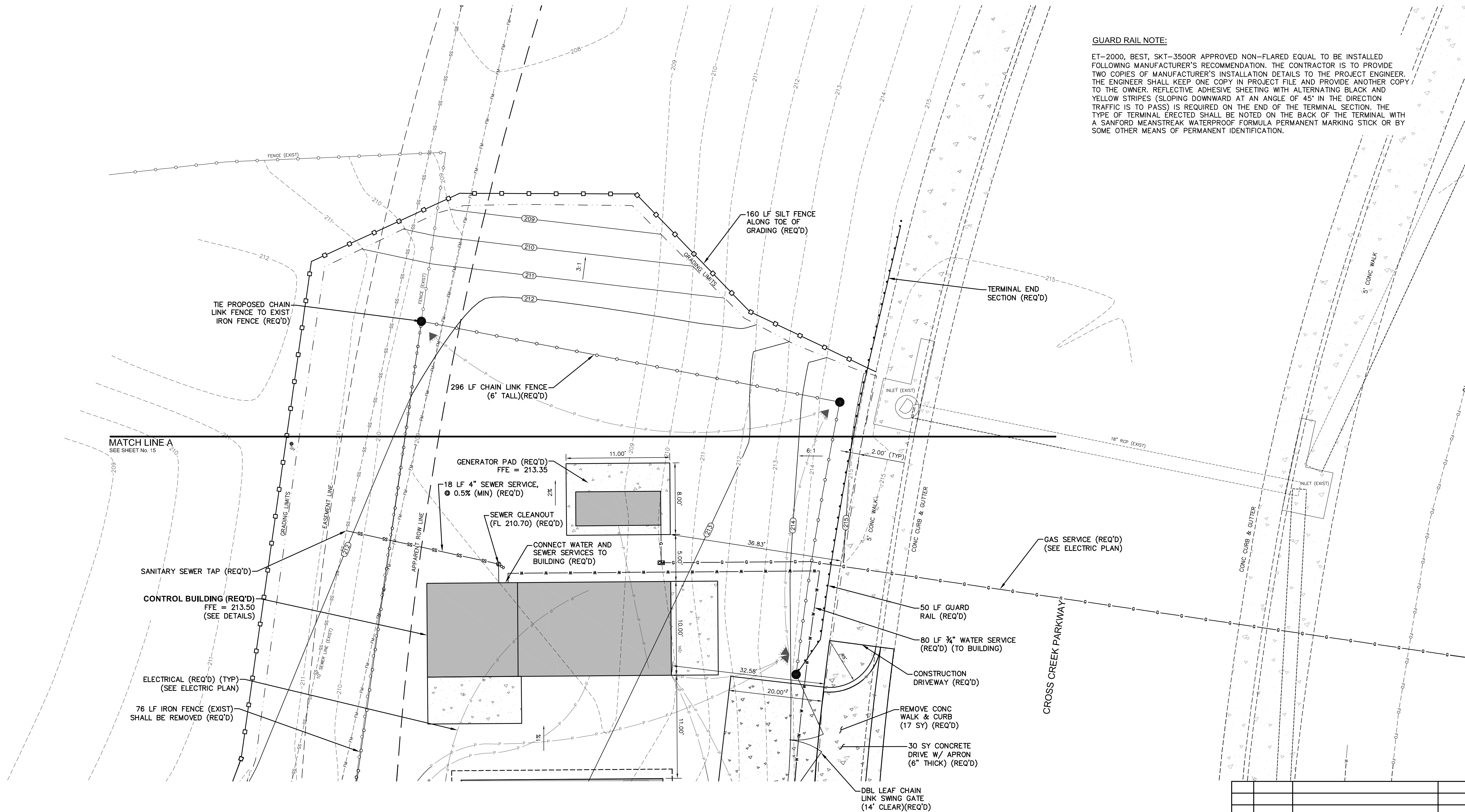


PUMP STATION NOTES:

- DOUBLE LEAF SWING GATES AND A SINGLE LEAF MAN GATE SHALL BE REQUIRED AS PART OF FENCE FOR THIS PUMP STATION. THE LOCATION OF EACH GATE SHALL BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION. GATES SHALL BE OF THE SAME MATERIAL CONSTRUCTION AS FENCE.
- ALL FENCE MATERIAL SHALL BE BLACK VINYL COATED AND INSTALLED AS DETAILED HEREIN, INCLUDING GATES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF THE ELECTRICAL SERVICE FOR THE PUMP STATION (INCLUDING BUT NOT LIMITED TO SERVICE POLE W/ SECURITY LIGHT, UNDERGROUND ELECTRICAL SERVICE, TRANSFORMER(S), METER BASE AND METER, ALL NECESSARY CONNECTIONS, PERMIT(S), APPLICATION(S), FEES, ETC.). (PAID UNDER PUMP STATION ITEM).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR BRINGING THE PUMP STATION SITE TO GRADE AS SHOWN ON THIS PLAN. THE CONTRACTOR SHALL FURNISH ALL FILL MATERIAL AS FOLLOWS: GENERAL FILL SHALL BE CLASS B9 COMPACTED TO 95% STANDARD PROCTOR, THE TOP 3 FEET OF FILL MATERIAL SHALL BE SELECT FILL COMPACTED TO 95% STANDARD PROCTOR.
- CONTRACTOR SHALL SUPPLY AND INSTALL CRUSHED AGGREGATE (SIZE 610) (4" DEPTH) THROUGHOUT THE INTERIOR OF THE FENCED AREA AND 1' OUTSIDE THE FENCE AND TO THE CONCRETE SIDEWALK ALONG CROSS CREEK PARKWAY.
- A 4" 2-WAY FREEZE PROOF HYDRANT SHALL BE INSTALLED INSIDE THE FENCED AREA. THE NOZZLE SHALL BE LOCATED 24" MIN FROM FINISH GRADE. ACCEPTABLE HYDRANTS SHALL BE M&H, MUELLER AND AMERICAN DARLING.
- CONTRACTOR SHALL VERIFY THE LOCATION & GRADE OF THE EXIST 12" DI FORCE MAIN & 20" CASING PRIOR TO CUTTING & REMOVAL.
- ALL DISTURBED AREAS OUTSIDE OF THE CRUSHED AGGREGATE AREAS SHALL RECEIVE BERMUDA SOD W/ 2" TOPSOIL PRIOR TO COMPLETION OF PROJECT.

PUMP STATION – SITE PLAN			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
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Drawn by: SLS	Checked by: KDW	Scale: AS NOTED	
Date: 12/16/2019	Working No. PSP1		
Drawing No.: 1273-S015	Sheet No. 15		

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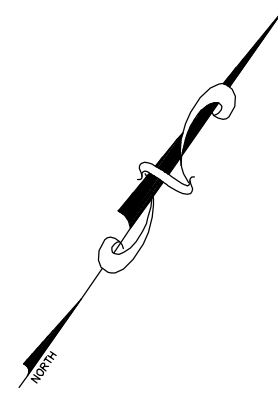
GUARD RAIL NOTE:

ET-2000, BEST, SKT-3500R APPROVED NON-FLARED EQUAL TO BE INSTALLED FOLLOWING MANUFACTURER'S RECOMMENDATION. THE CONTRACTOR IS TO PROVIDE TWO COPIES OF MANUFACTURER'S INSTALLATION DETAILS TO THE PROJECT ENGINEER. THE ENGINEER SHALL KEEP ONE COPY IN PROJECT FILE AND PROVIDE ANOTHER COPY TO THE OWNER. REFLECTIVE ADHESIVE SHEETING WITH ALTERNATING BLACK AND YELLOW STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS) IS REQUIRED ON THE END OF THE TERMINAL SECTION. THE TYPE OF TERMINAL ERECTED SHALL BE NOTED ON THE BACK OF THE TERMINAL WITH A SANFORD MEANSTREAK WATERPROOF FORMULA PERMANENT MARKING STICK OR BY SOME OTHER MEANS OF PERMANENT IDENTIFICATION.

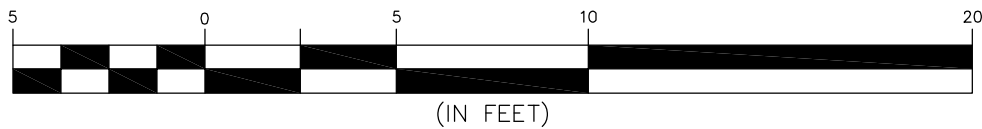
CROSS CREEK PARKWAY

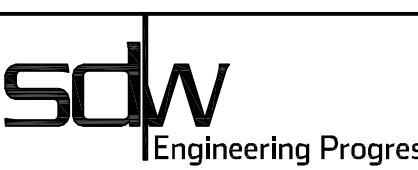
LEGEND:

- 220 — PROPOSED CONTOURS (1' INTERVALS)
- - - 219 - - - EXISTING CONTOURS (1' INTERVALS)

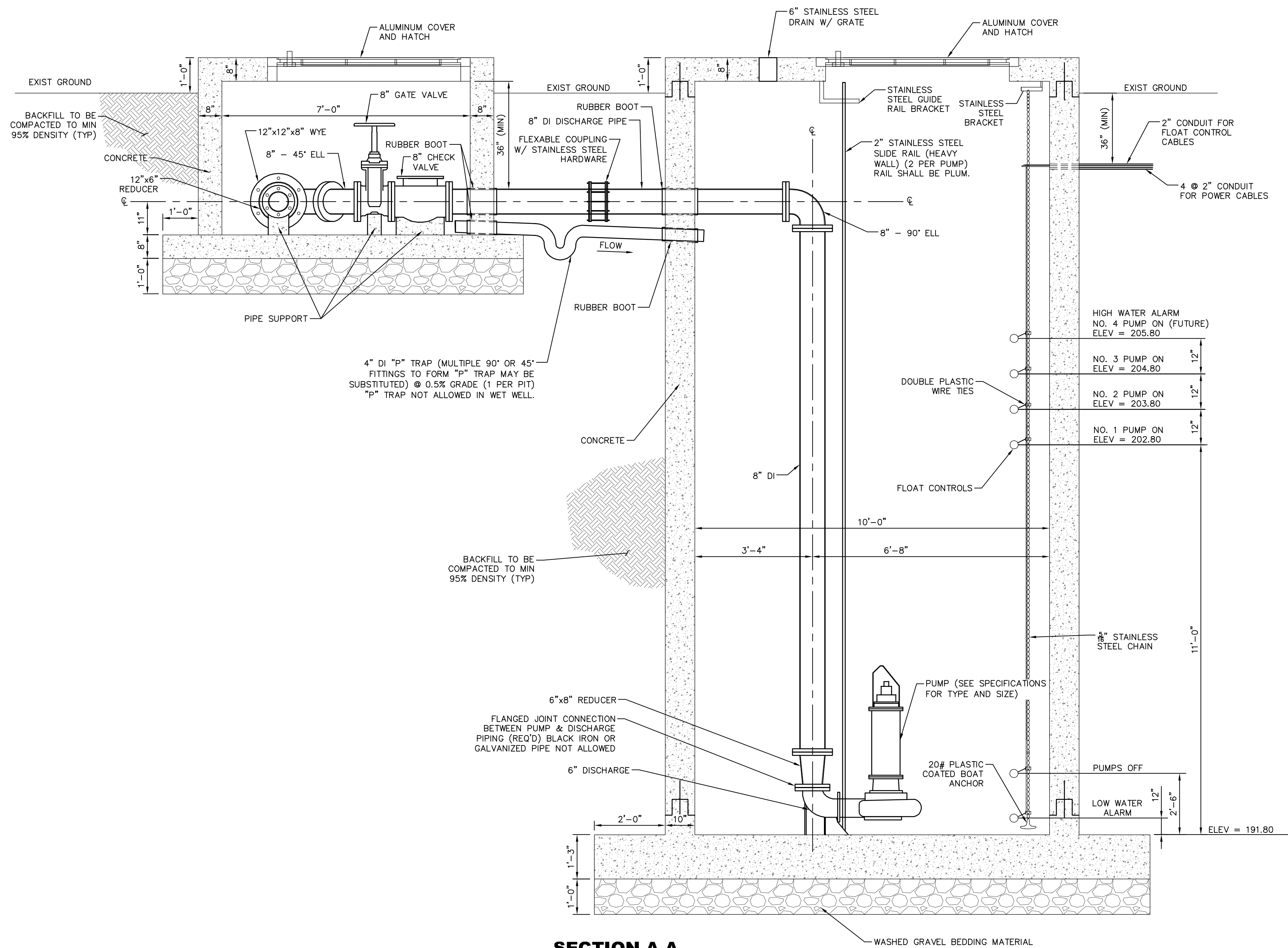


GRAPHIC SCALE

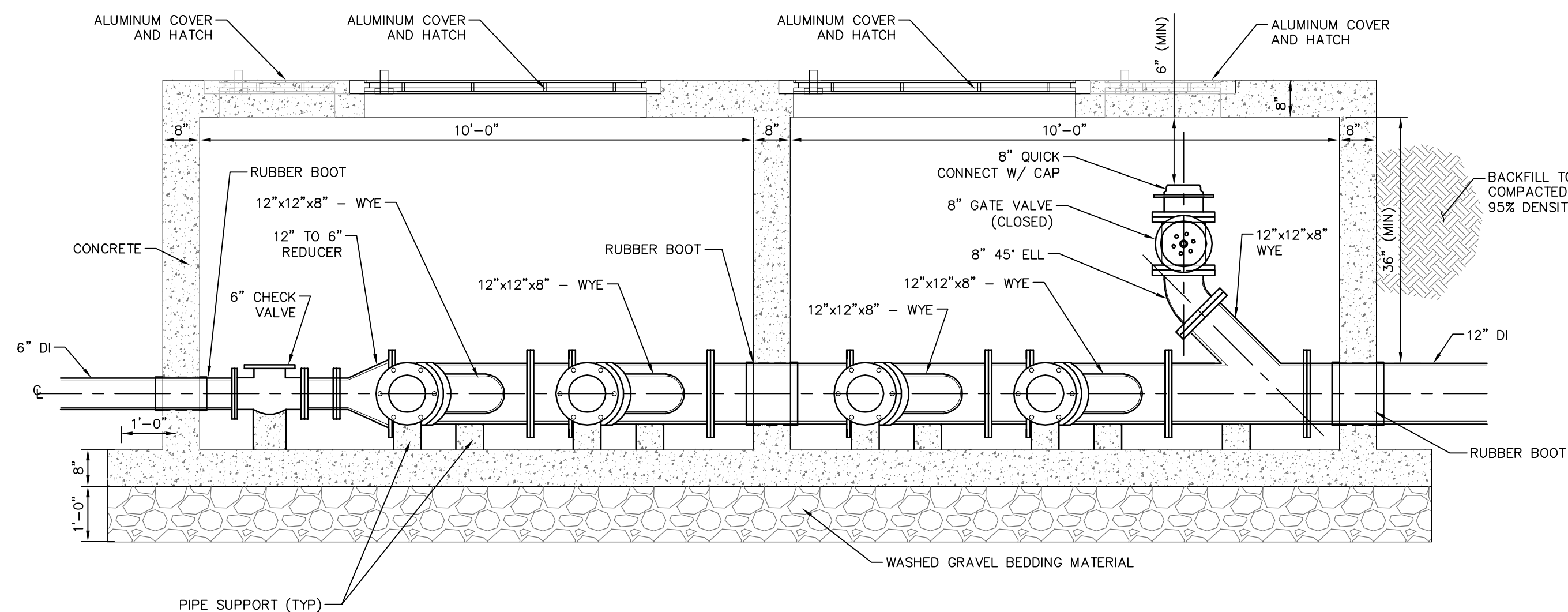


NO.	DATE	DESCRIPTION	BY
PUMP STATION – SITE PLAN			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
			
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Date: 12/16/2019		Working No. _____	
Drawing No.: 1273-S015		Sheet No. _____ 16 _____	

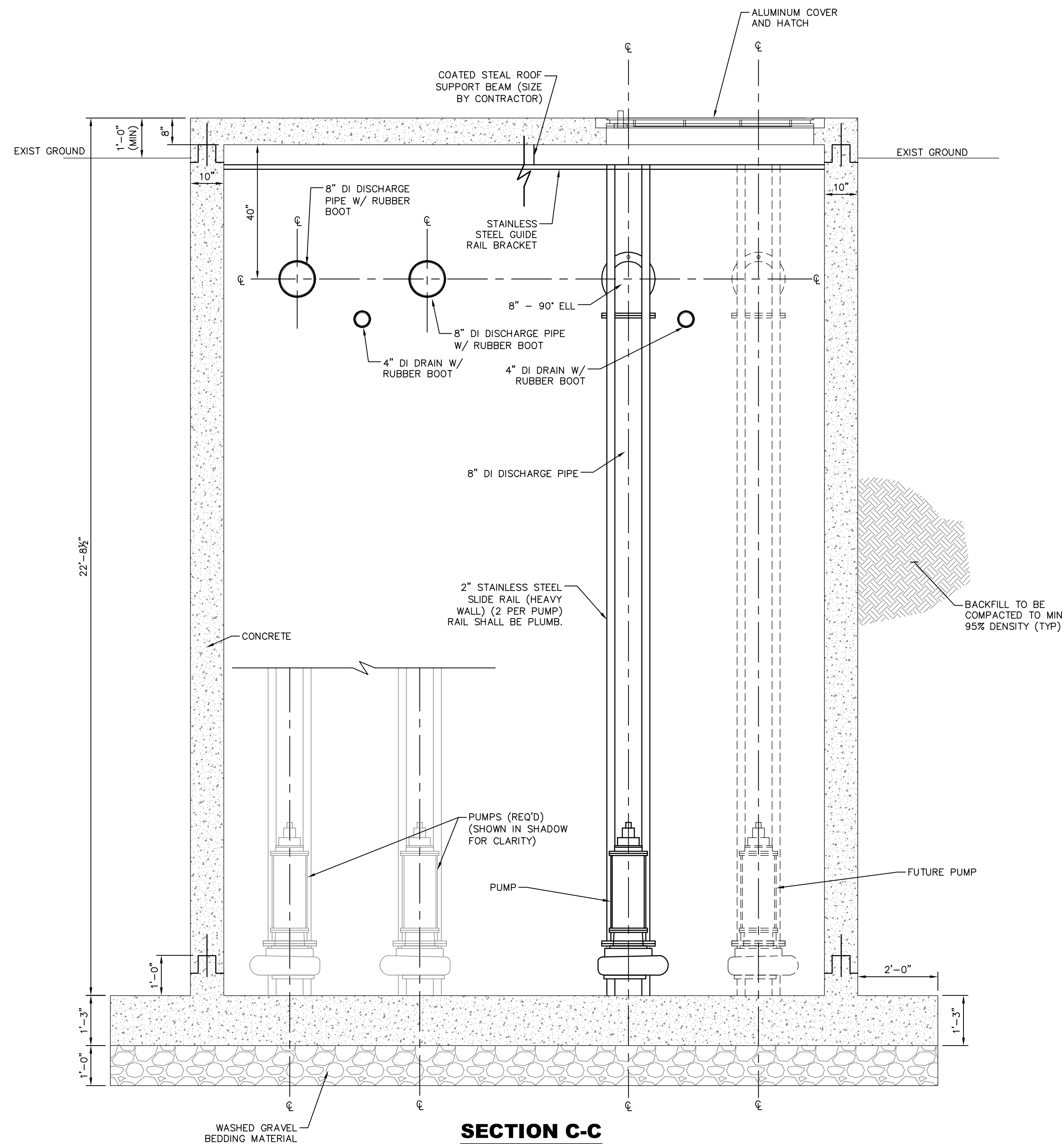
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SECTION A-A

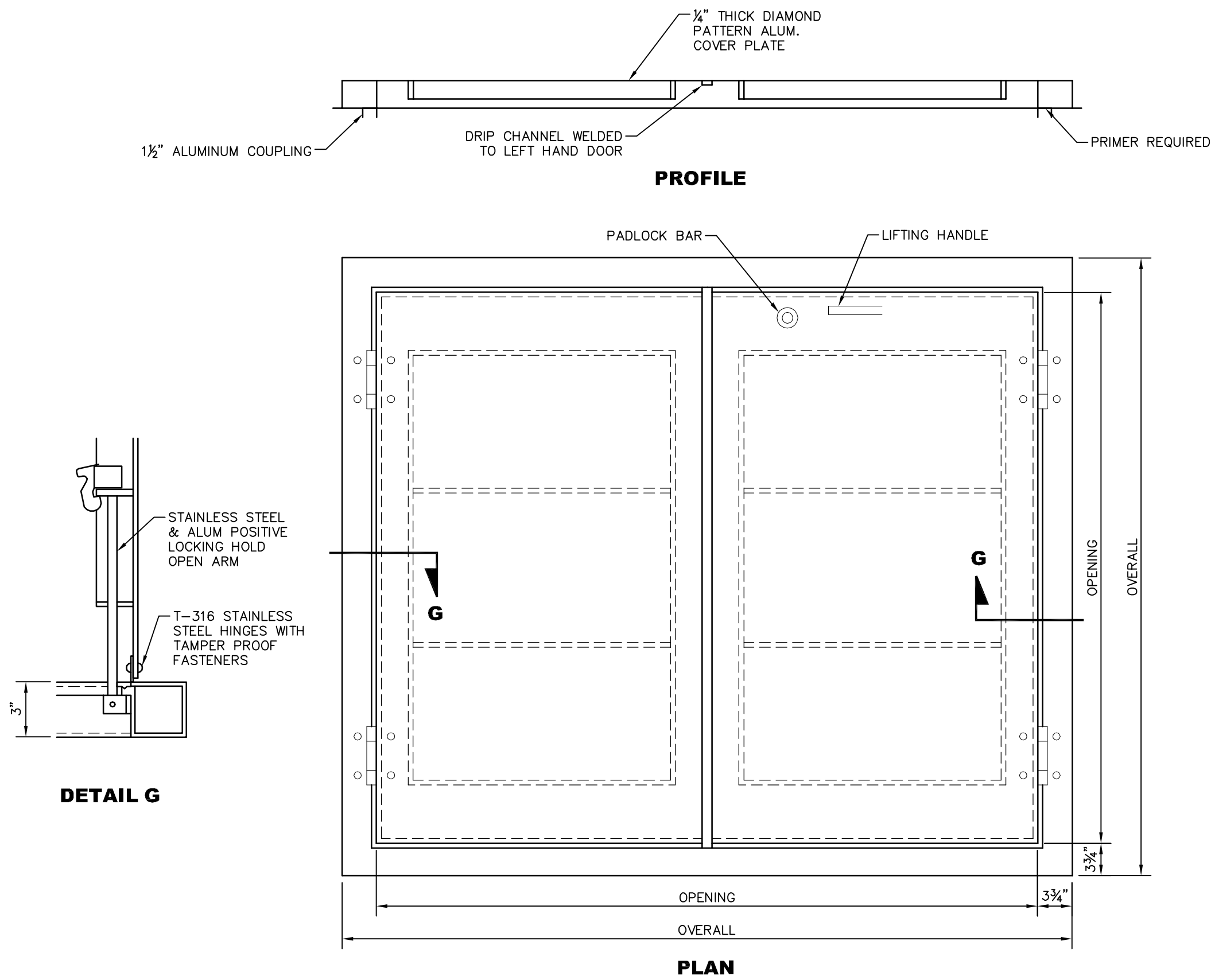


SECTION B-B

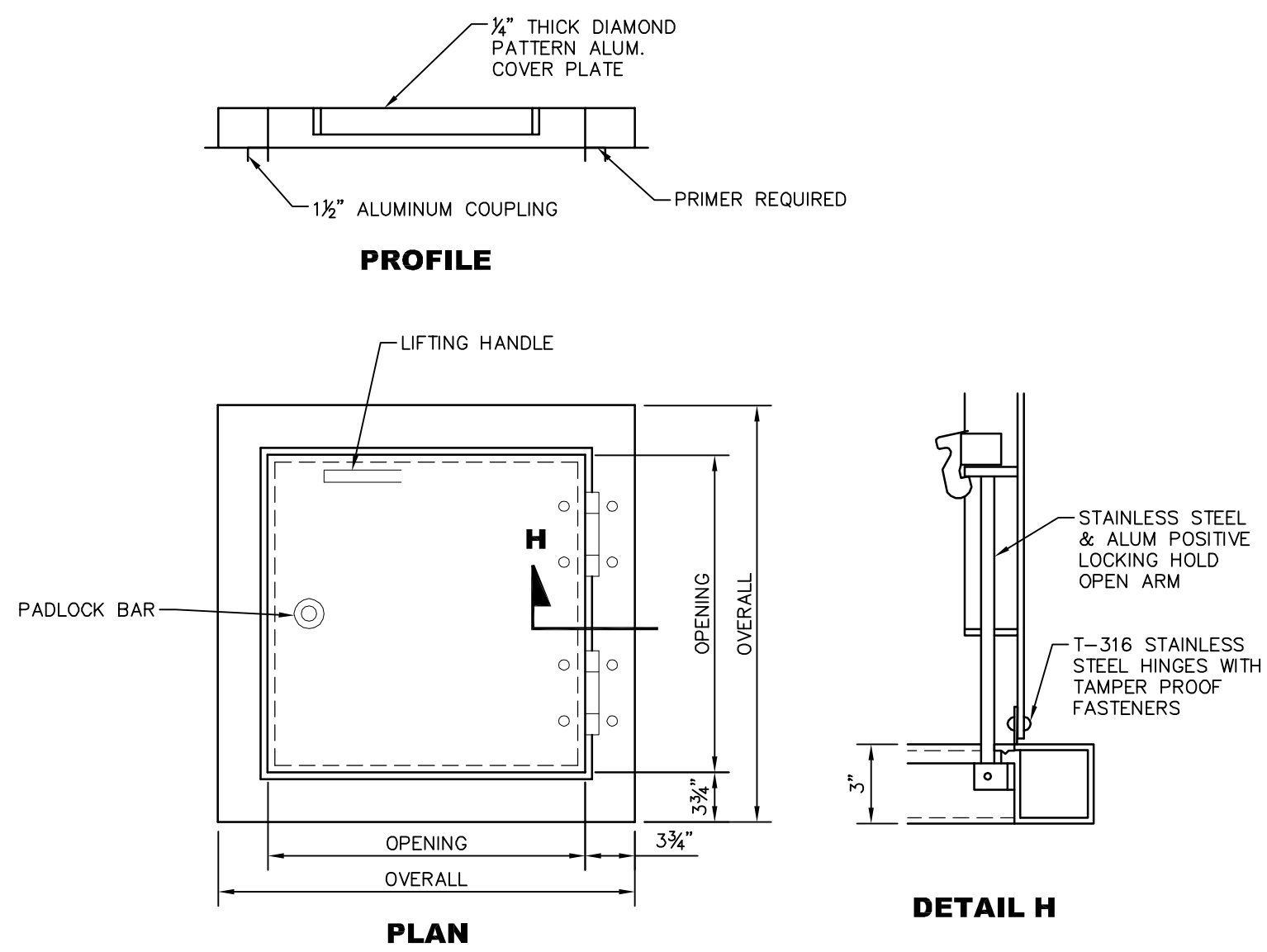


SECTION C-C

NO.	DATE	DESCRIPTION	BY
SEWER PUMP STATION – SECTIONS			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
			
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Date: 12/16/2019		Working No. SPS2	
Drawing No.: 1273-S015		Sheet No. 18	

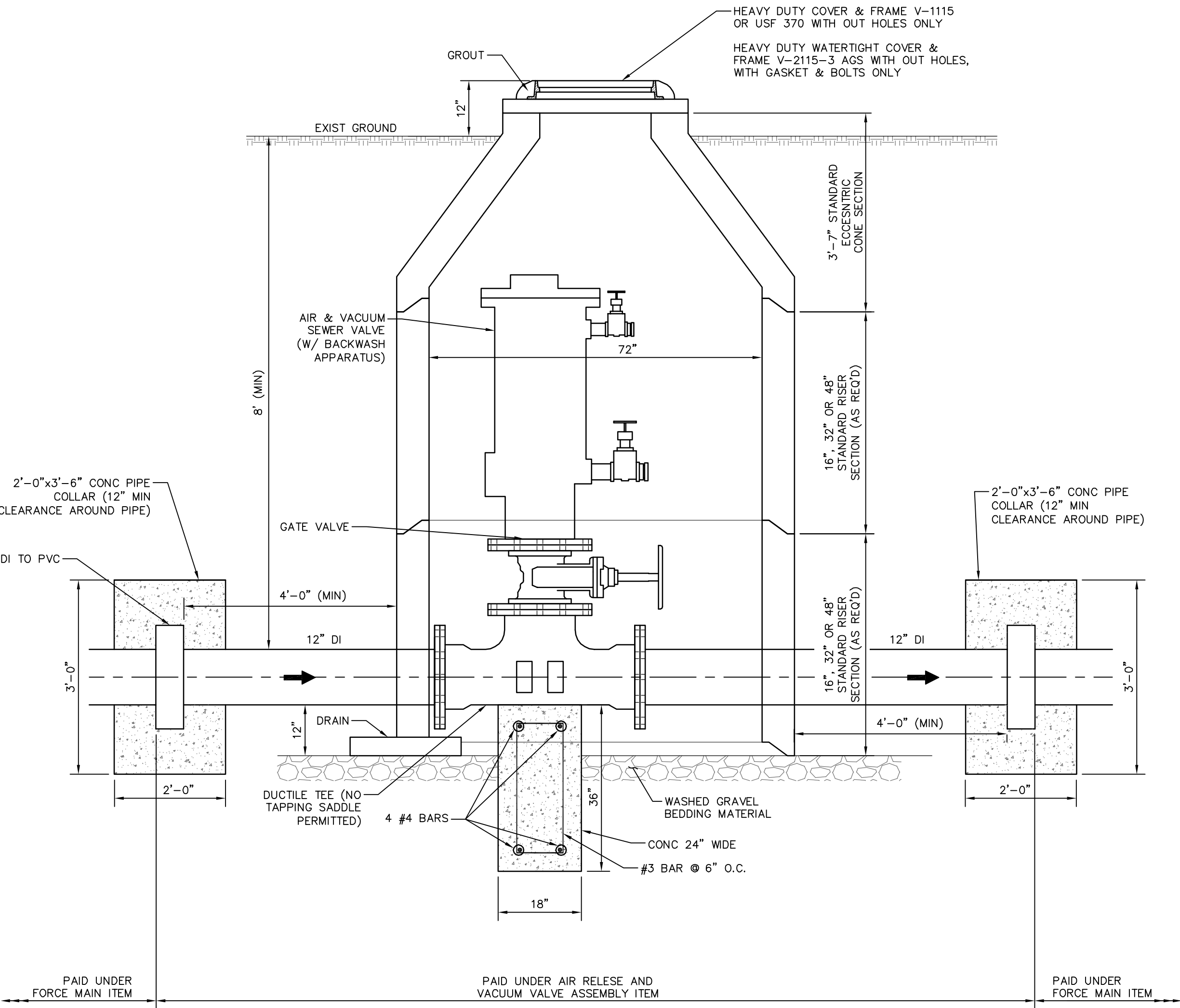


DOUBLE LEAF COVER AND HATCH DETAIL
(NOT TO SCALE)

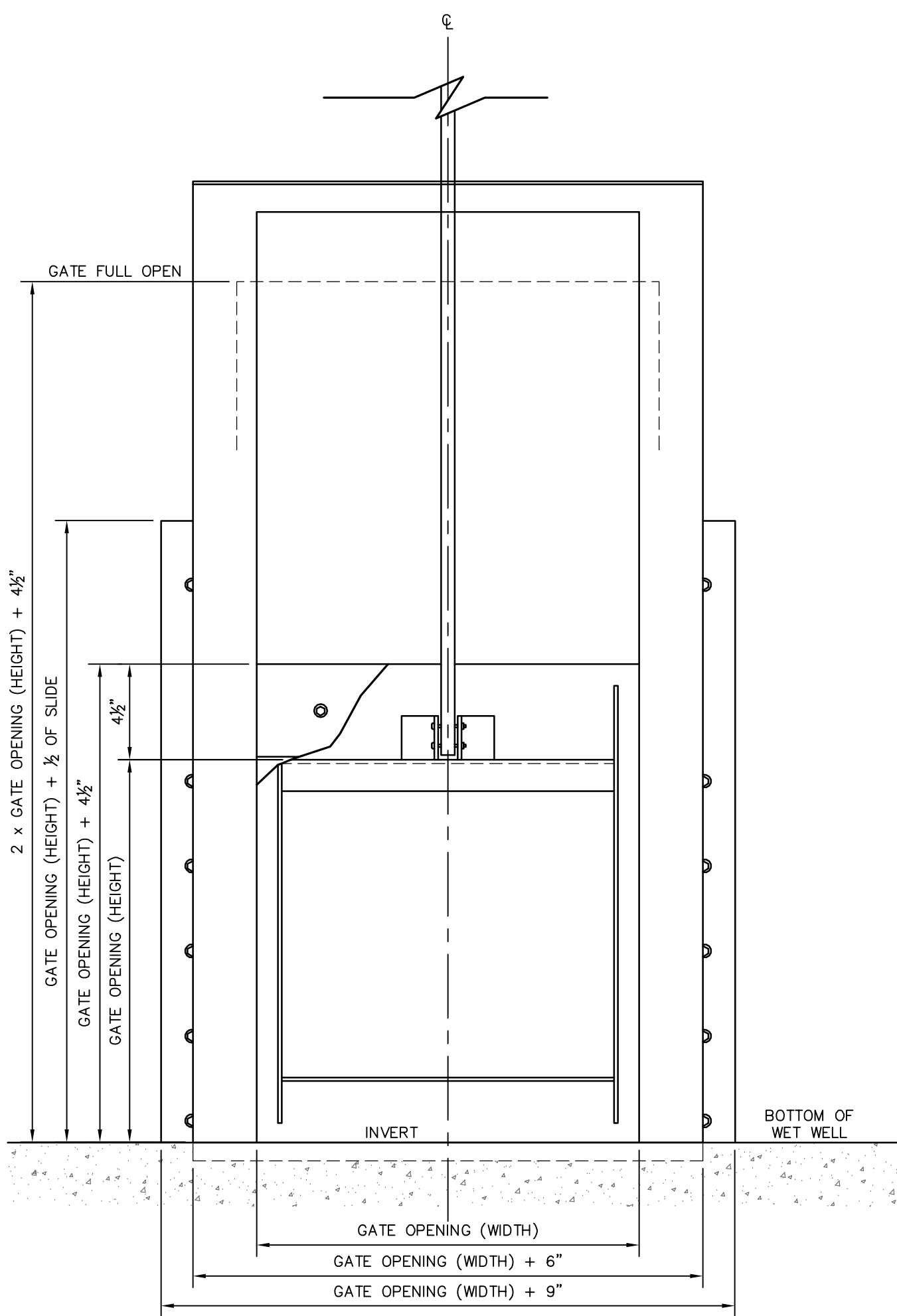


SINGLE LEAF COVER AND HATCH DETAIL
(NOT TO SCALE)

- ALUMINUM COVER AND HATCH NOTES:
1. THE S1R SERIES (SINGLE LEAF) ACCESS FRAMES AND COVERS AS MANUFACTURED BY HALLIDAY PRODUCTS, INC. OF ORLANDO, FLORIDA, OR EQUAL, SHALL HAVE A 1/4" THICK ONE-PIECE, MILL FINISH, EXTRUDED ALUMINUM FRAME, INCORPORATING A CONTINUOUS CONCRETE ANCHOR. DOOR PANEL SHALL BE 1/4" ALUMINUM DIAMOND PLATE, REINFORCED TO WITHSTAND A LIVE LOAD OF 300 LBS. PSF. DOOR SHALL OPEN TO 90 AUTOMATICALLY LOCK WITH A T-316 STAINLESS STEEL HOLD OPEN ARM WITH ALUMINUM RELEASE HANDLE. DOOR SHALL CLOSE FLUSH WITH THE FRAME. HINGES AND ALL FASTENING HARDWARE SHALL BE T-316 STAINLESS STEEL. UNIT SHALL LOCK WITH A NON-CORROSIVE LOCKING BAR AND HAVE A NON-CORROSIVE HANDLE. UNIT SHALL CARRY A LIFETIME GUARANTEE AGAINST DEFECTS IN MATERIAL AND/OR WORKMANSHIP.
 2. THE S2R SERIES (DOUBLE LEAF) ACCESS FRAMES AND COVERS AS MANUFACTURED BY HALLIDAY PRODUCTS, INC. OF ORLANDO, FLORIDA, OR EQUAL, SHALL HAVE A 1/4" THICK ONE-PIECE, MILL FINISH, EXTRUDED ALUMINUM FRAME, INCORPORATING A CONTINUOUS CONCRETE ANCHOR. DOOR PANELS SHALL BE 1/4" ALUMINUM DIAMOND PLATE, REINFORCED TO WITHSTAND A LIVE LOAD OF 300 LBS. PSF. DOORS SHALL OPEN TO 90 AND AUTOMATICALLY LOCK WITH T-316 STAINLESS STEEL HOLD OPEN ARMS WITH ALUMINUM RELEASE HANDLES. DOORS SHALL CLOSE FLUSH WITH THE FRAME. HINGES AND ALL FASTENING HARDWARE SHALL BE T-316 STAINLESS STEEL. UNIT SHALL LOCK WITH A NON-CORROSIVE LOCKING BAR AND HAVE A NON-CORROSIVE HANDLE. UNIT SHALL CARRY A LIFETIME GUARANTEE AGAINST DEFECTS IN MATERIAL AND/OR WORKMANSHIP.

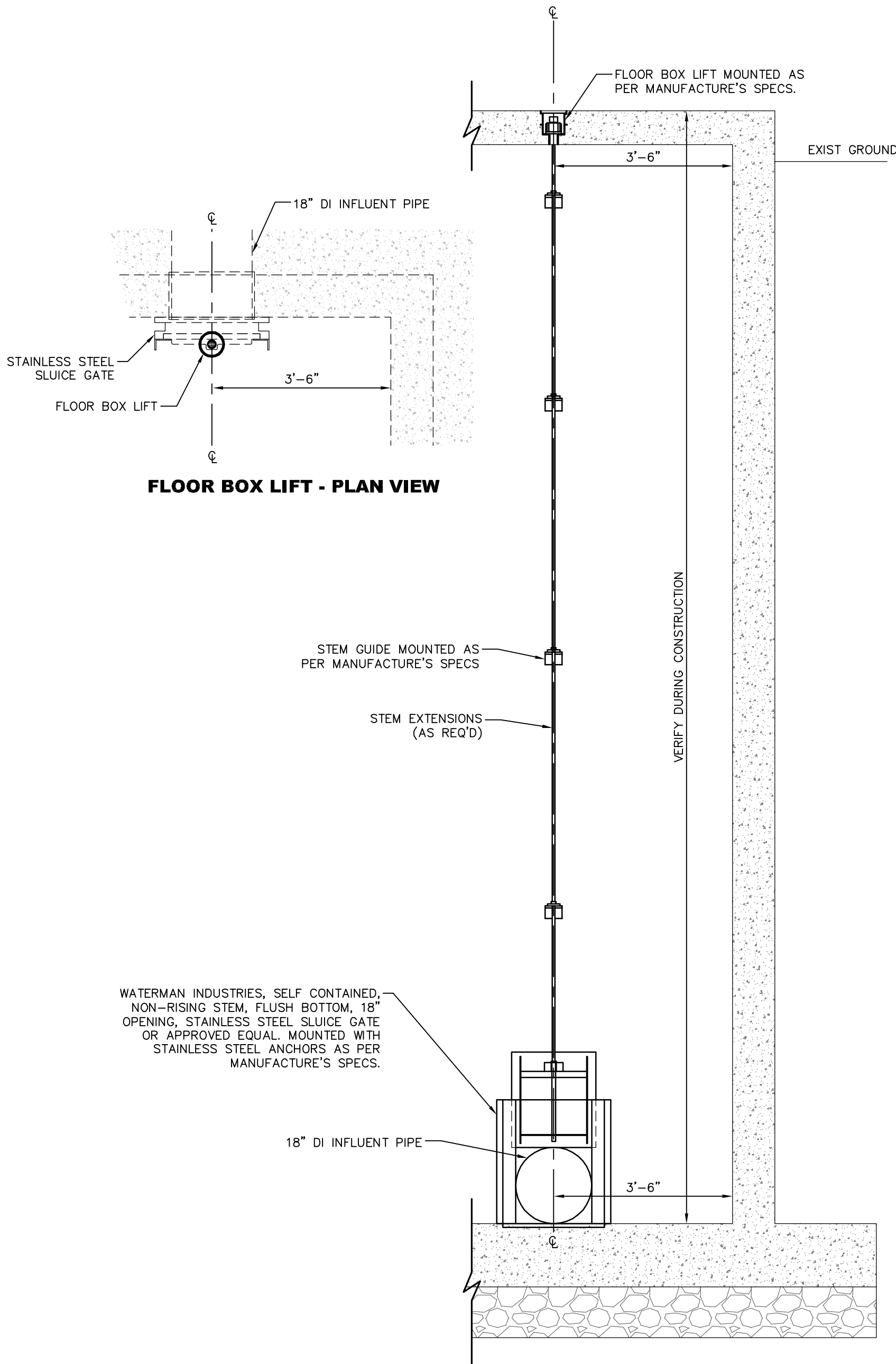


FORCE MAIN AIR AND VACUUM RELESE
SEWER VALVE DETAIL
(NOT TO SCALE)

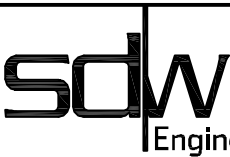


SLUICE GATE
(NOT TO SCALE)

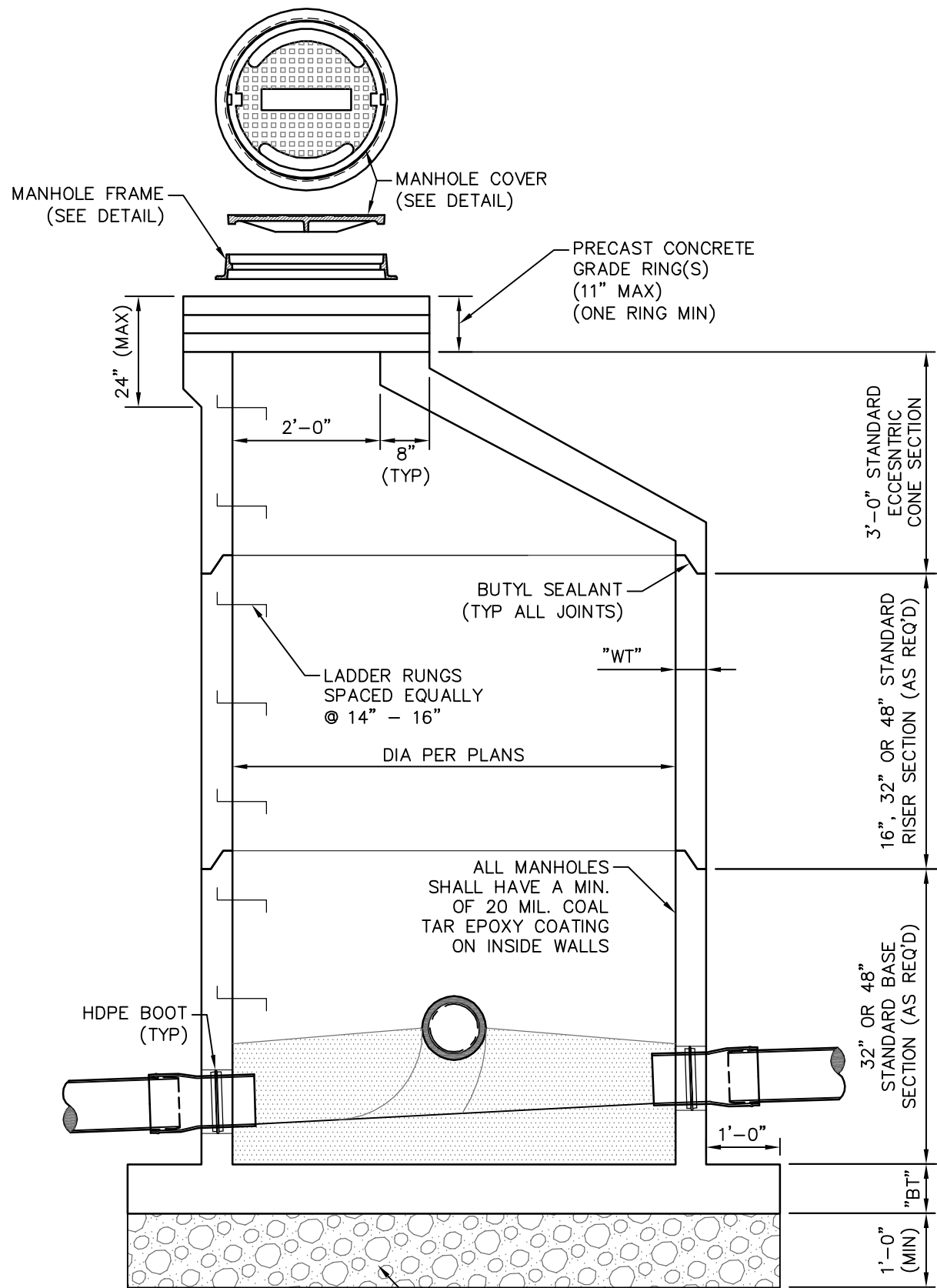
NOTES:
WATERMAN INDUSTRIES, SELF CONTAINED, NON-RISING STEM, FLUSH BOTTOM, 18" OPENING, STAINLESS STEEL SLUICE GATE OR APPROVED EQUAL. MOUNTED WITH STAINLESS STEEL ANCHORS AS PER MANUFACTURE'S SPECS.



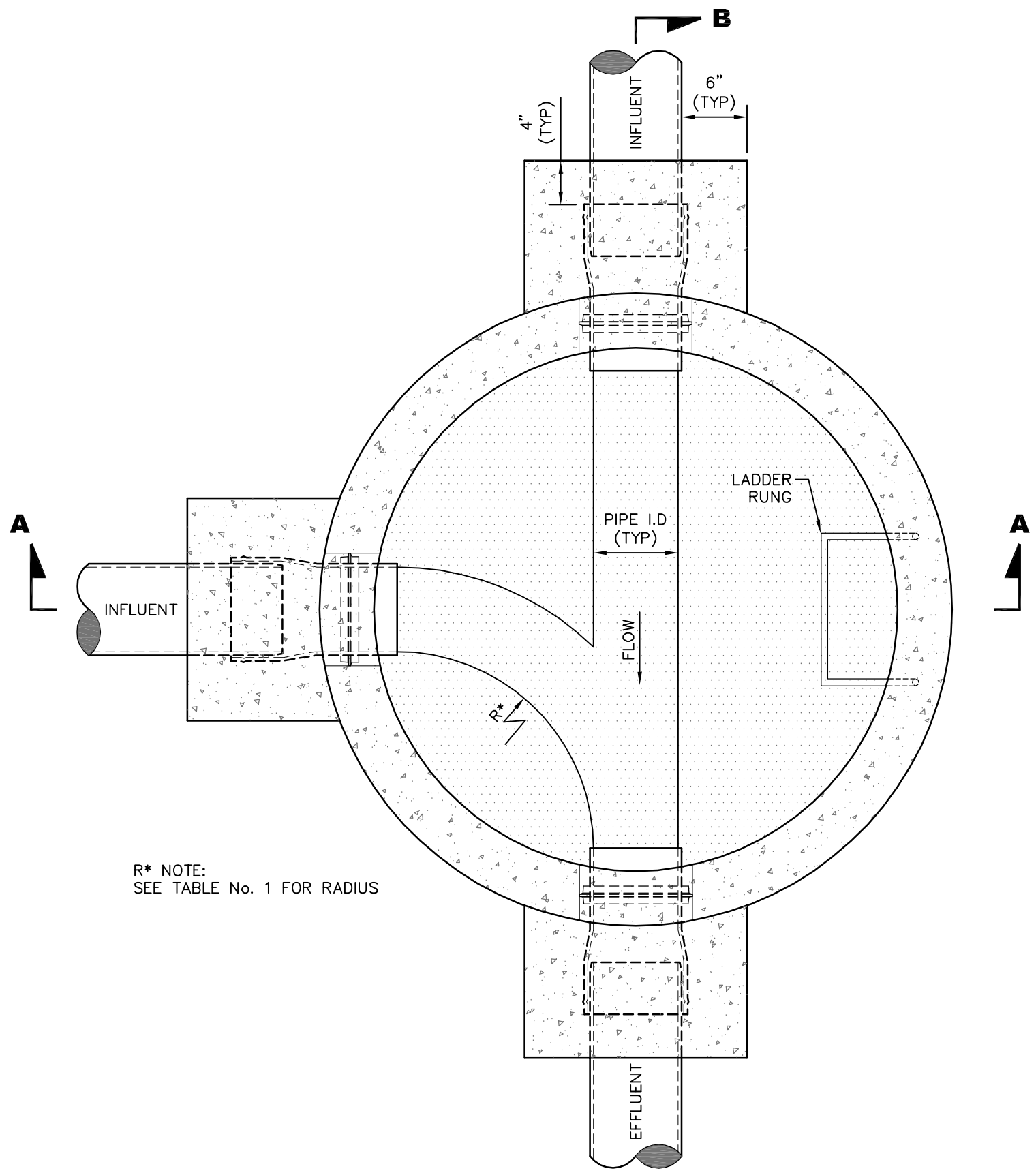
SECTION G
(SCALE: 1" = 2')

NO.	DATE	DESCRIPTION	BY
SEWER PUMP STATION – DETAILS			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
			
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Drawn by: SLS		Checked by: KDW	Scale: AS NOTED
Date: 12/16/2019		Working No. SPS3	
Drawing No.: 1273-S015		Sheet No. 19	

CONCRETE WALL THICKNESS TABLE		
MANHOLE DIA (INCHES)	(WT) MINIMUM WALL THICKNESS (INCHES)	(BT) MINIMUM BASE THICKNESS (INCHES)
48	5	6
60	6	8
72	7	8
96	8	8



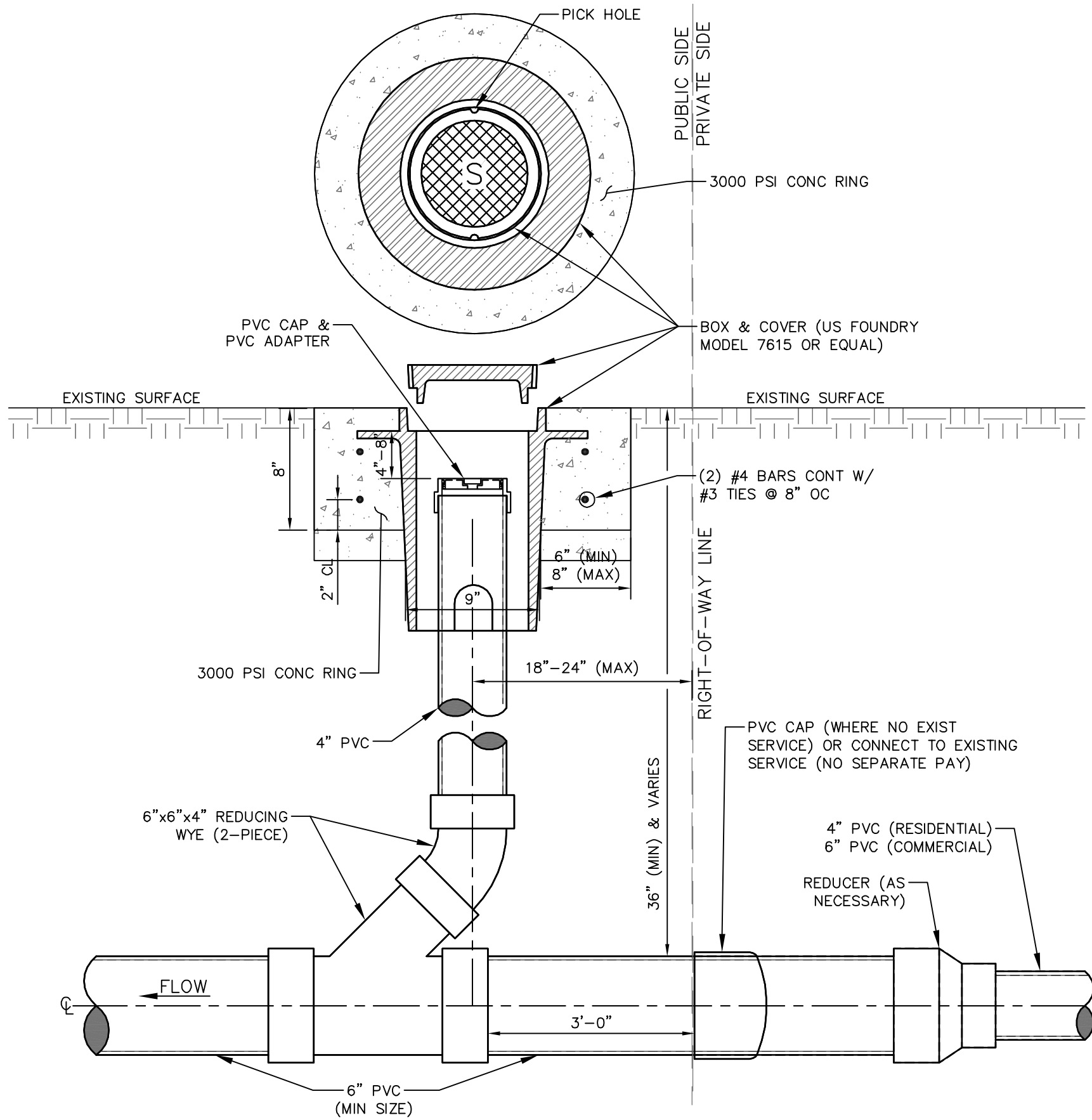
TYPICAL MANHOLE SECTION



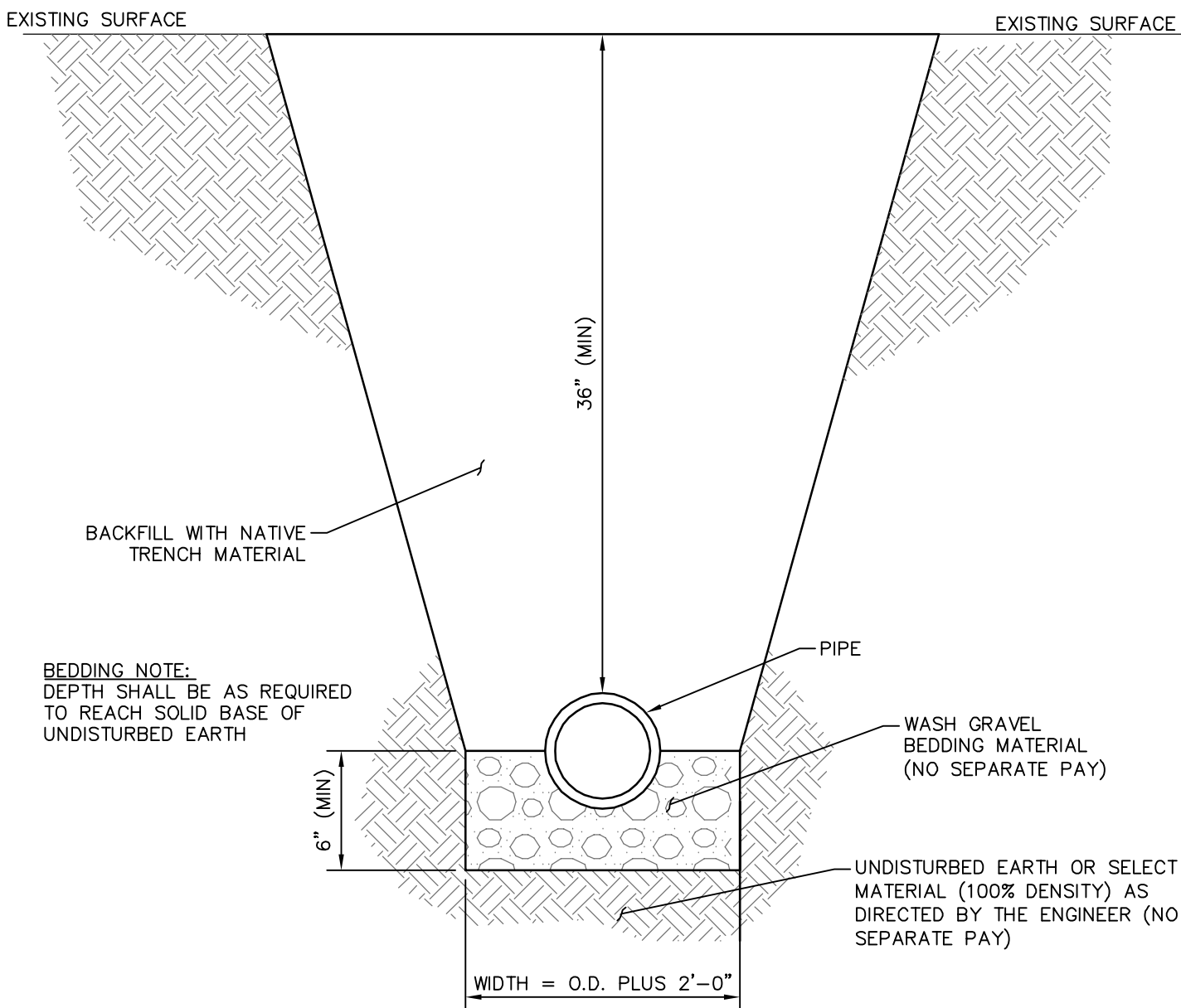
STANDARD PRECAST CONCRETE MANHOLE - PLAN VIEW

SHOWN WITH 48" Ø MANHOLE, LARGER DIAMETER MANHOLES MAY BE SIMILAR DESIGN, IF APPROVED BY THE ENGINEER. SHOWN WITH PVC PIPE.

TABLE NO. 1 GOVERNING DIMENSIONS FOR MANHOLES			
PIPE SIZE	ANGLE	MIN. BASE Ø	"R"*
8" - 12"	0° - 90°	48"	18"
15"	0° - 60°	60"	22"
15"	60° - 90°	60"	22"
18"	0° - 90°	60"	27"
18"	60° - 90°	60"	22"
21"	0° - 90°	60"	31"
21"	60° - 90°	60"	28"
24"	0° - 45°	72"	36"
24"	45° - 90°	72"	27"
30"	0° - 60°	72"	45"
30"	60° - 90°	72"	32"
36"	0° - 30°	84"	54"

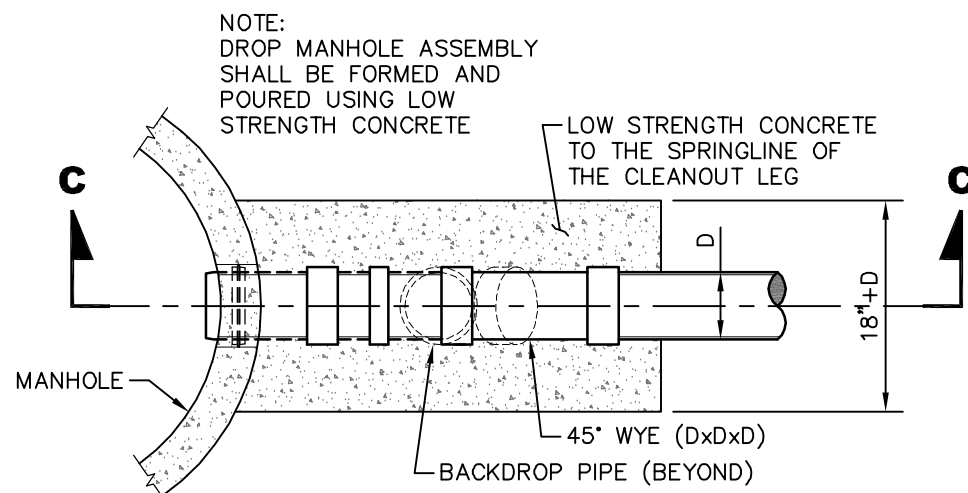


SANITARY SEWER CLEANOUT DETAIL - SECTION VIEW
FOR NON-PAVED AREA

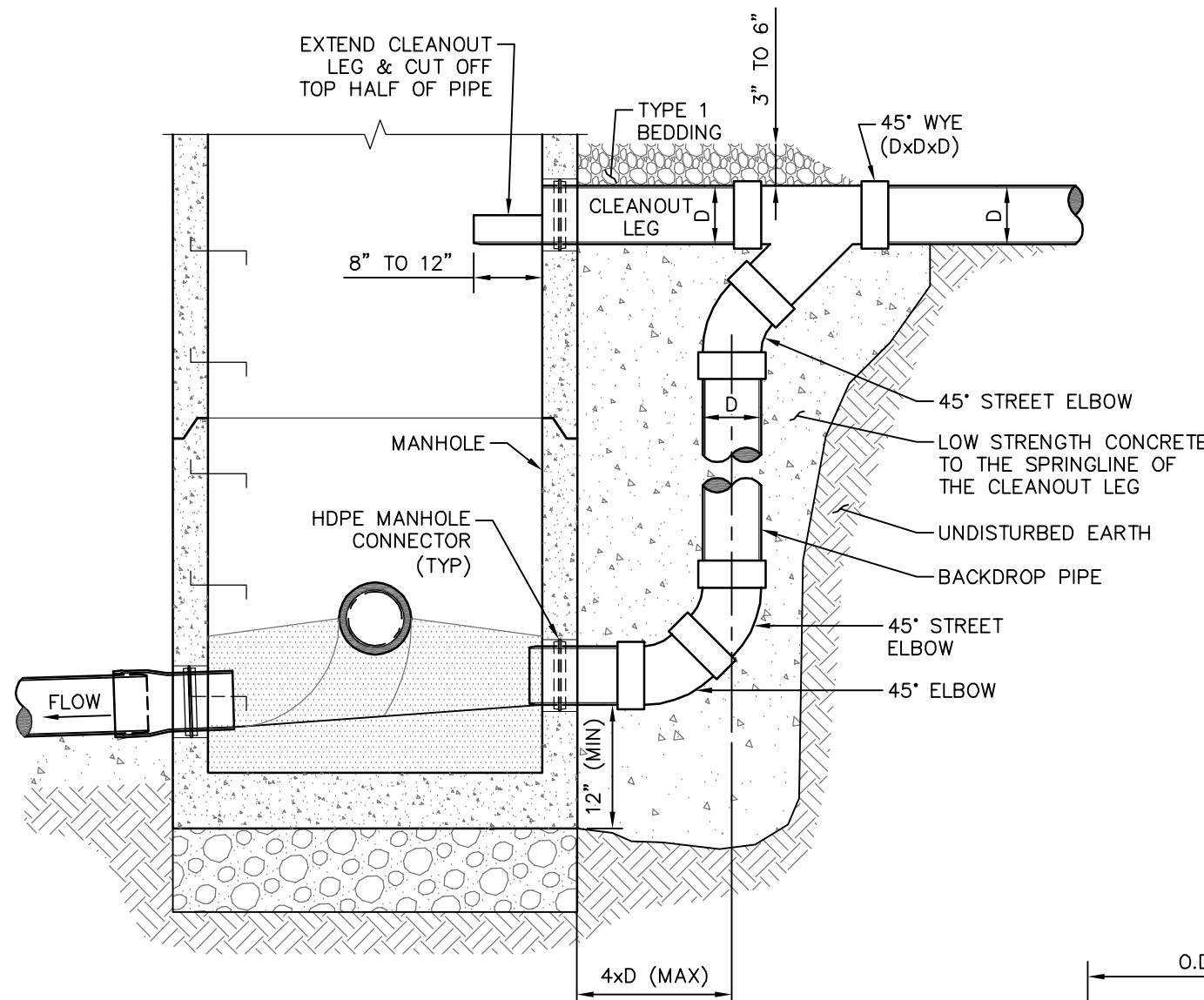


TYPICAL TRENCH IN NON-PAVED AREAS DETAIL

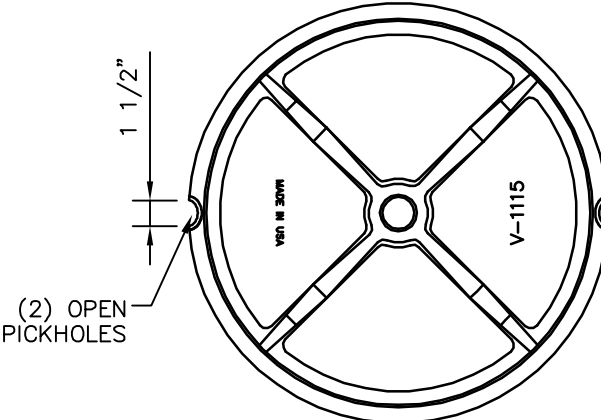
NOTE: TRENCH WIDTHS SHALL BE MINIMIZED BY THE CONTRACTOR TO ONLY NECESSARY FOR CONSTRUCTION AS DETERMINED BY THE ENGINEER.



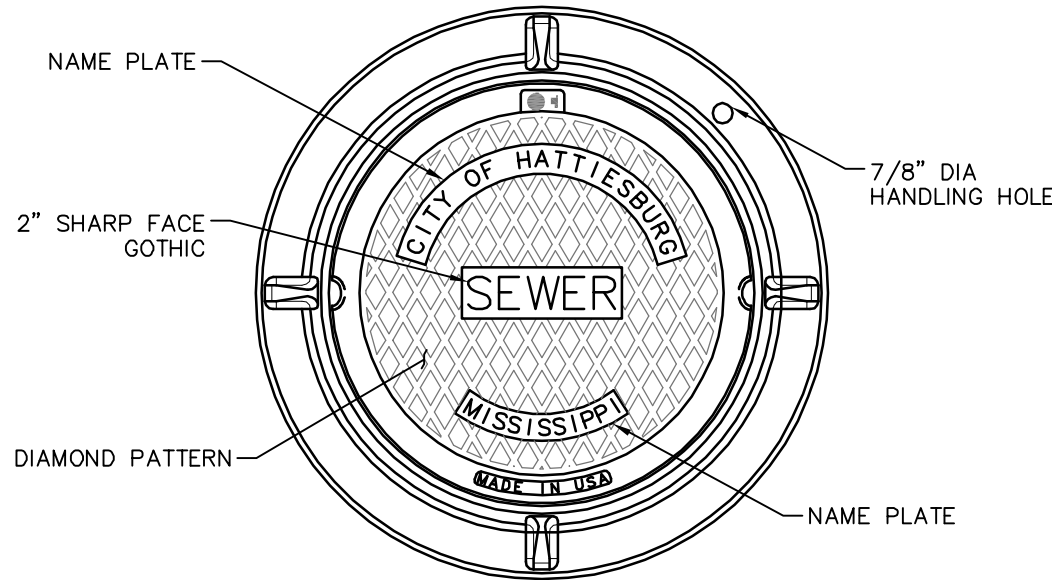
EXTERIOR DROP CLEANOUT MANHOLE ASSEMBLY - PLAN VIEW



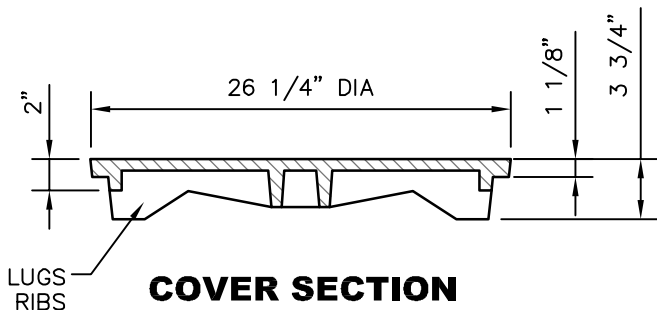
DETAIL "B" TYPICAL EXTERIOR DROP CLEANOUT ASSEMBLY ELEVATION



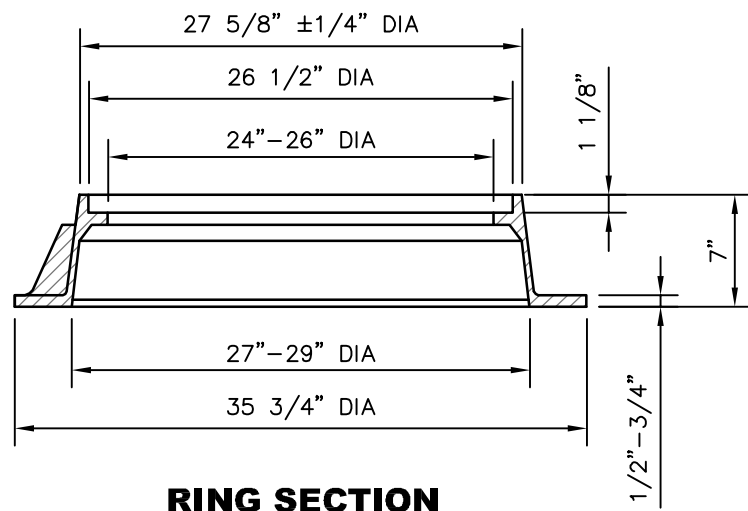
INVERTED PLAN COVER



PLAN WITH FRAME



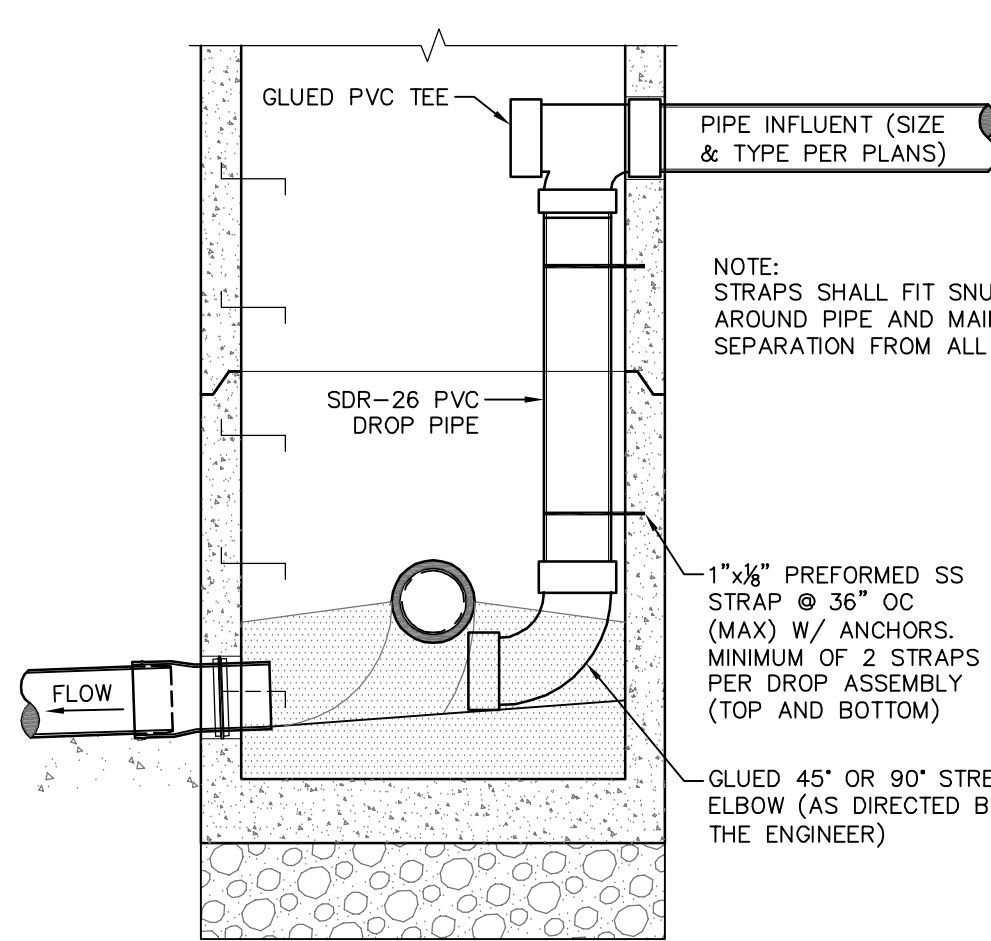
COVER SECTION



RING SECTION

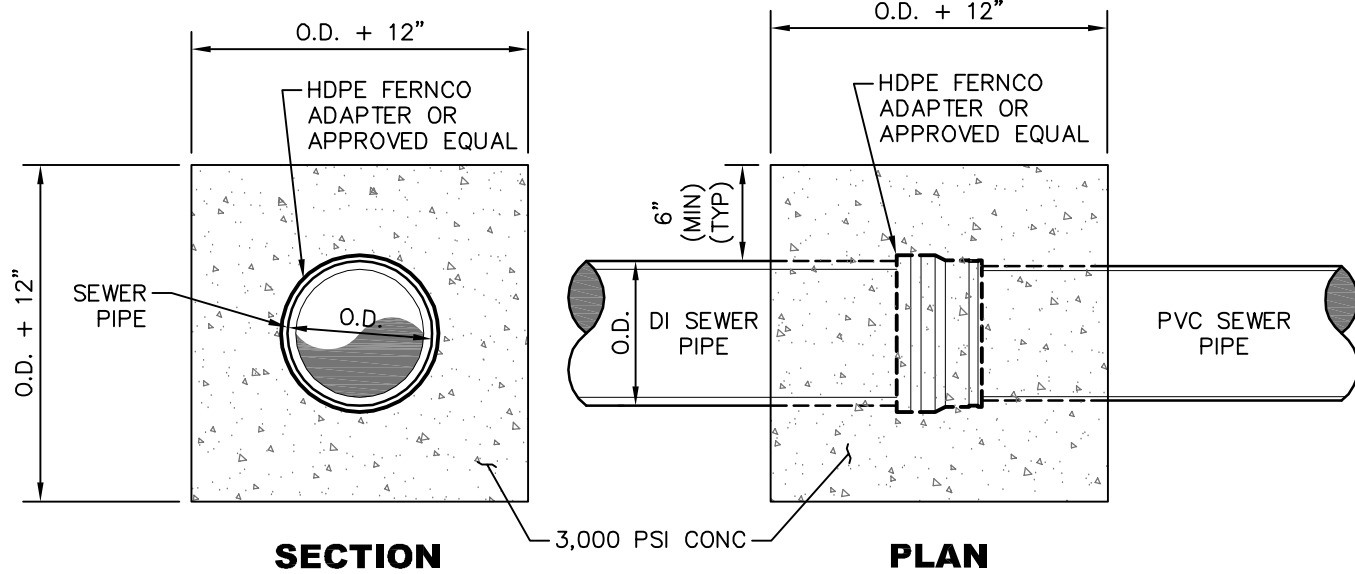
HEAVY DUTY COVER & FRAME V-1115 OR USF 370 WITH OUT HOLES ONLY
HEAVY DUTY WATERTIGHT COVER & FRAME V-2115-3 AGS WITH OUT HOLES, WITH GASKET & BOLTS ONLY

MANHOLE COVER DETAILS



DETAIL "A" TYPICAL INTERIOR DROP CLEANOUT ASSEMBLY ELEVATION

DROP CLEANOUT NOTES:
1. USE DETAIL "A" SHOWN ABOVE, ONLY WHERE A SINGLE 8" DROP ASSEMBLY CONNECTION INSIDE A 48" DIA. MANHOLE IS REQUIRED. FOR MULTIPLE DROP CONNECTIONS INSIDE A 48" MANHOLE USE DETAIL "B", SHOWN AT LEFT. FOR MULTIPLE DROP CONNECTION ASSEMBLIES IN LARGER DIAMETER MANHOLES THE DROP CONNECTIONS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.
2. ALL HARDWARE SHALL BE STAINLESS STEEL.
3. ALL APPURTENANCES REQUIRED FOR A COMPLETE DROP CONNECTION ASSEMBLY SHALL BE INCLUDED IN THE BID PRICE.



TYPICAL PVC SEWER PIPE TO SAME SIZE DUCTILE IRON SEWER PIPE CONNECTION

EPIC DETAIL

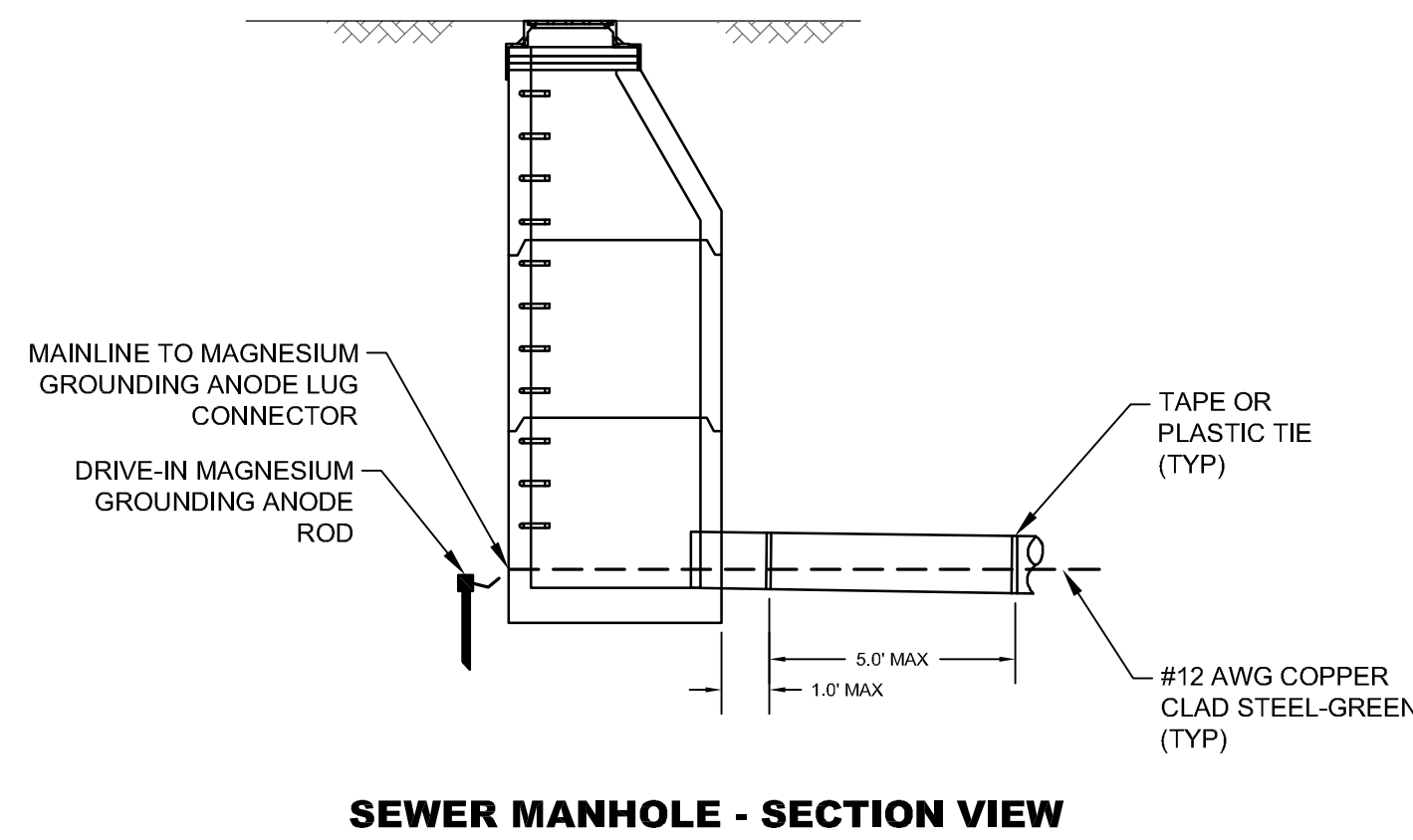
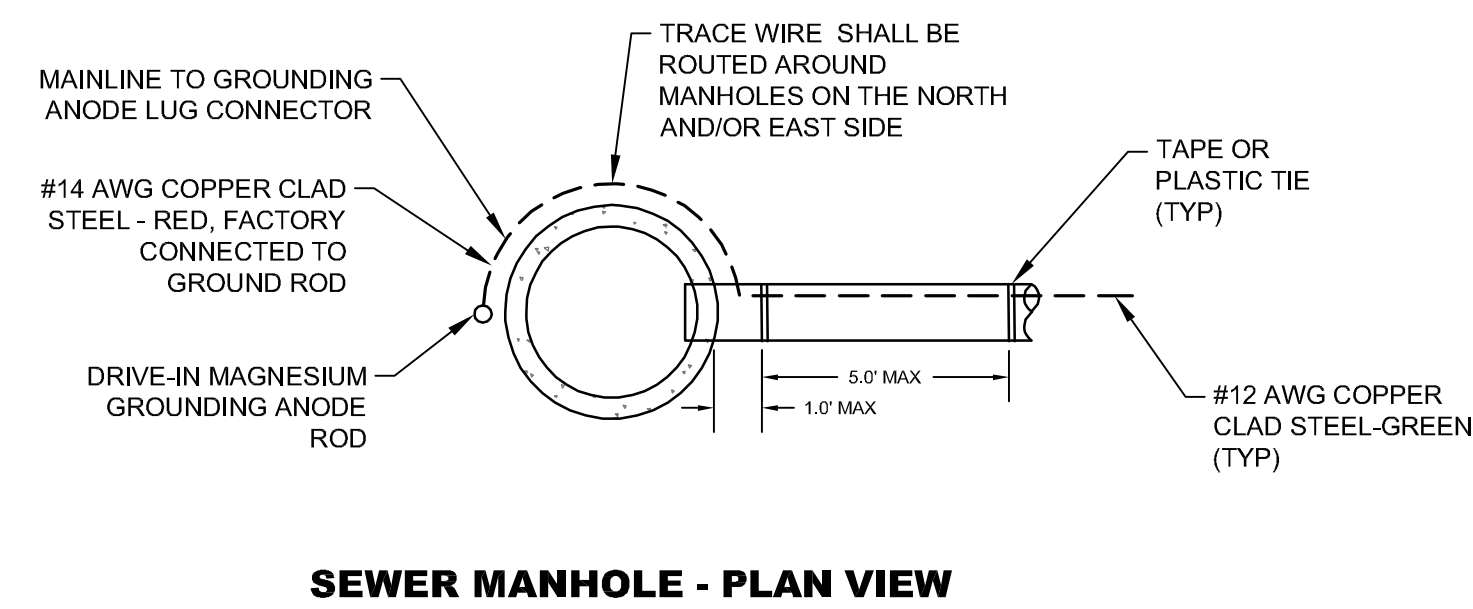
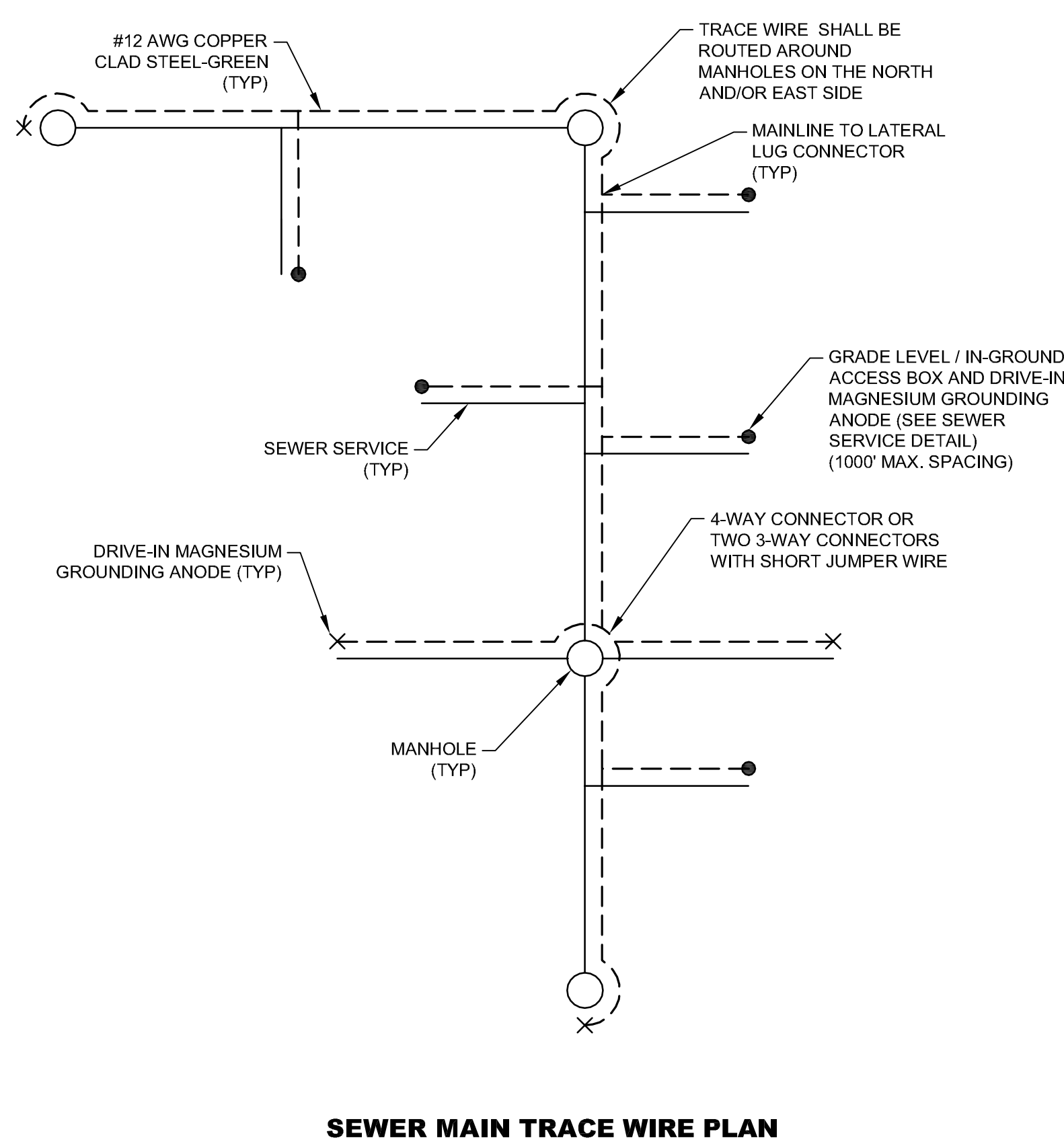
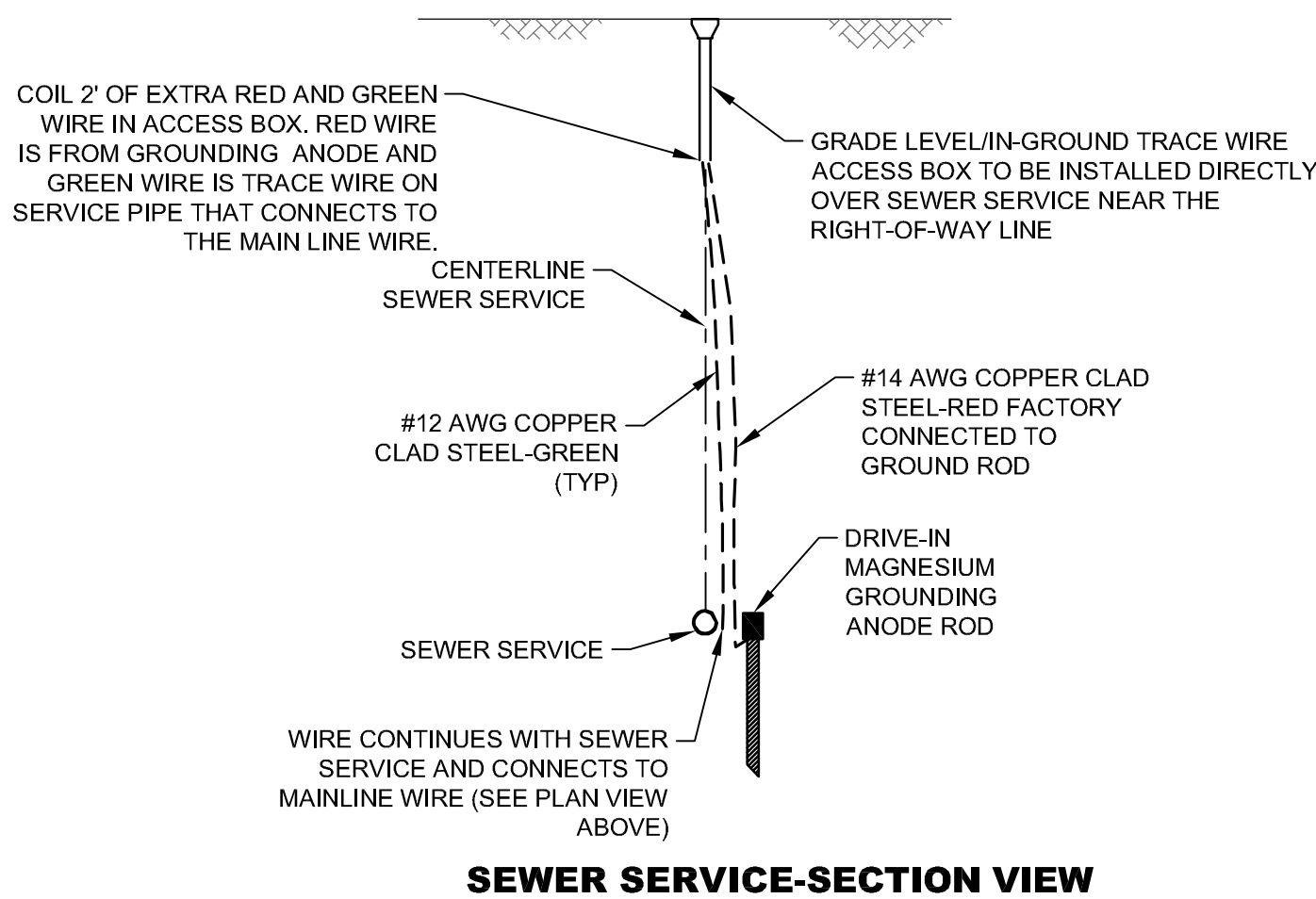
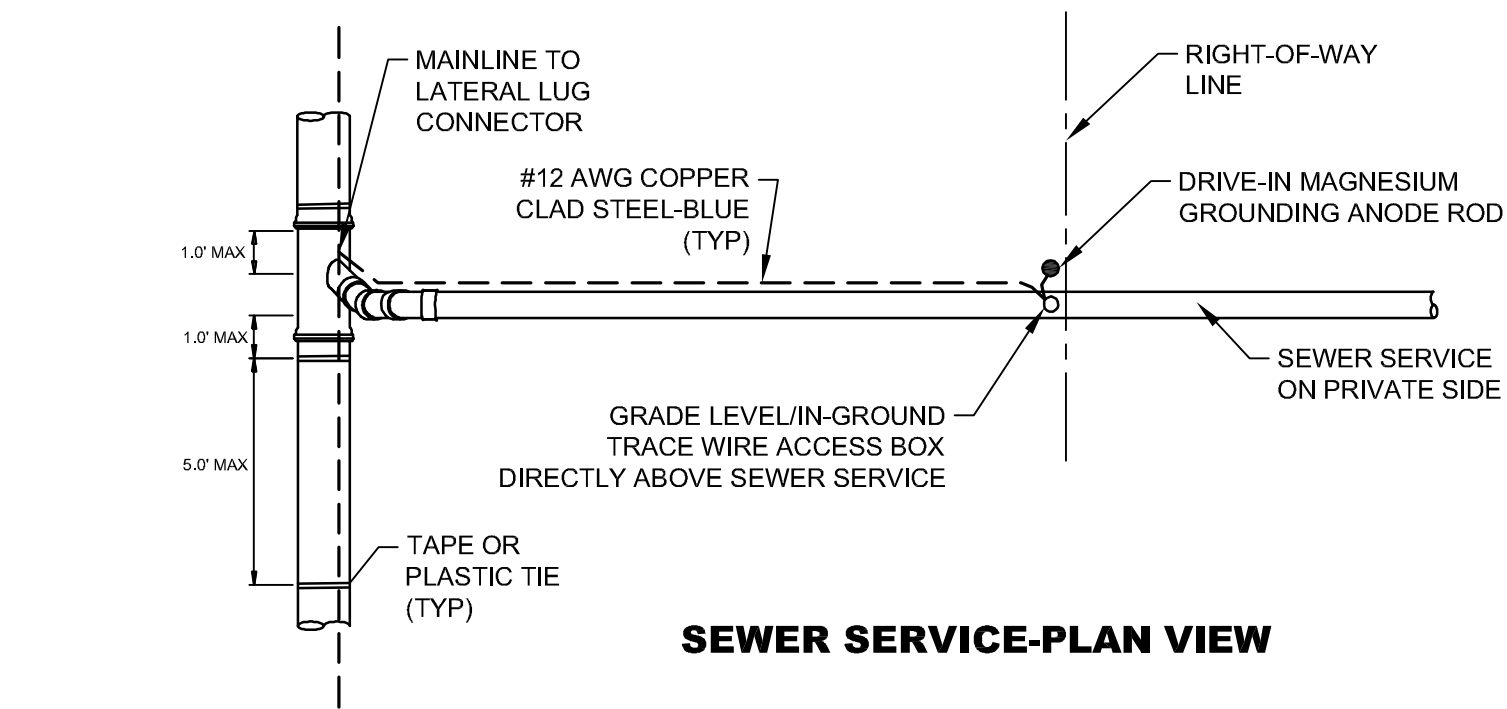
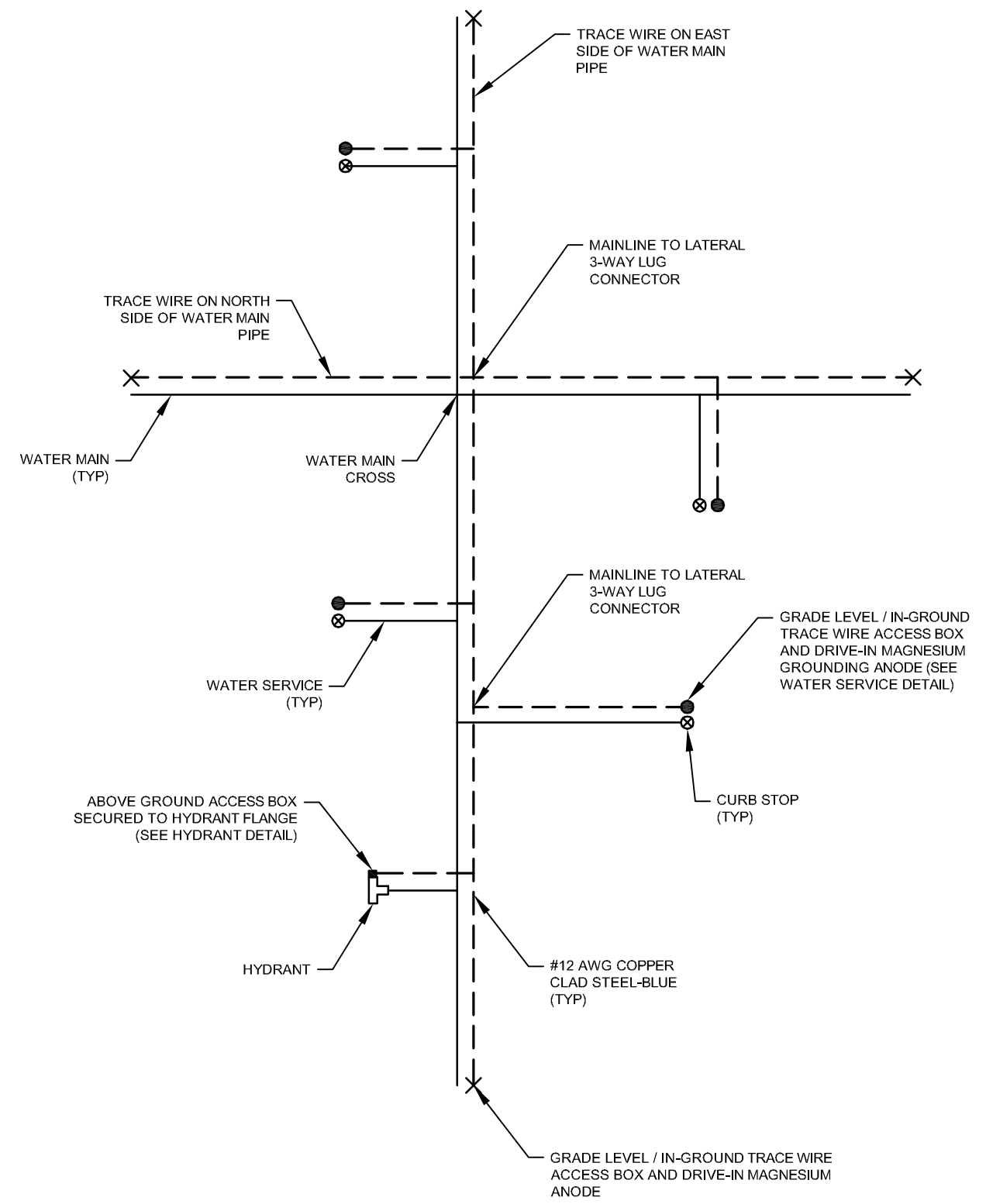
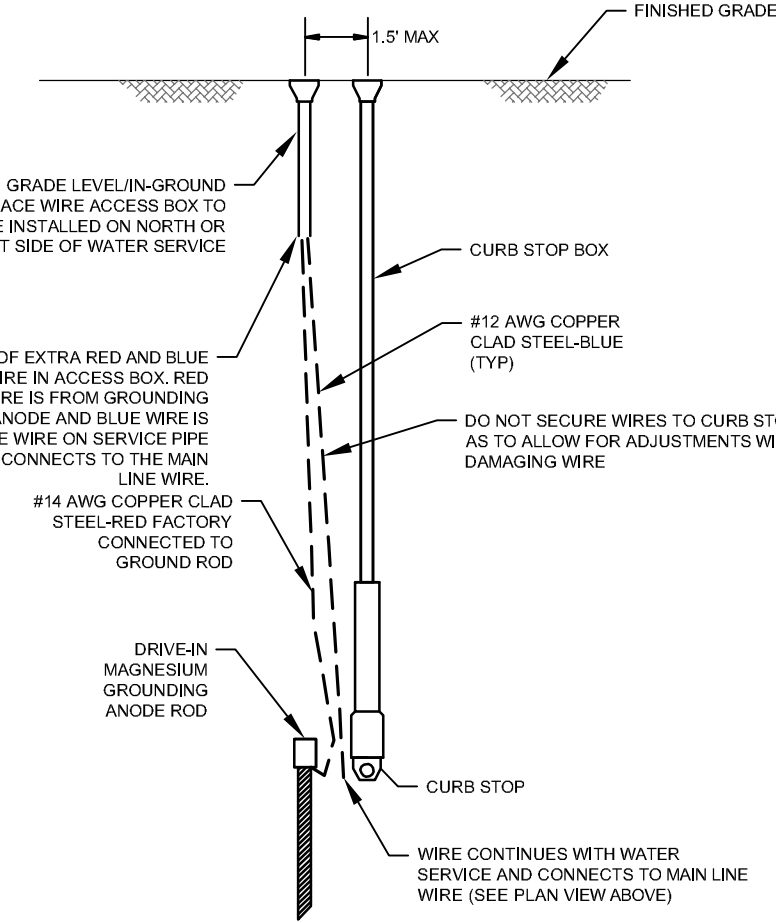
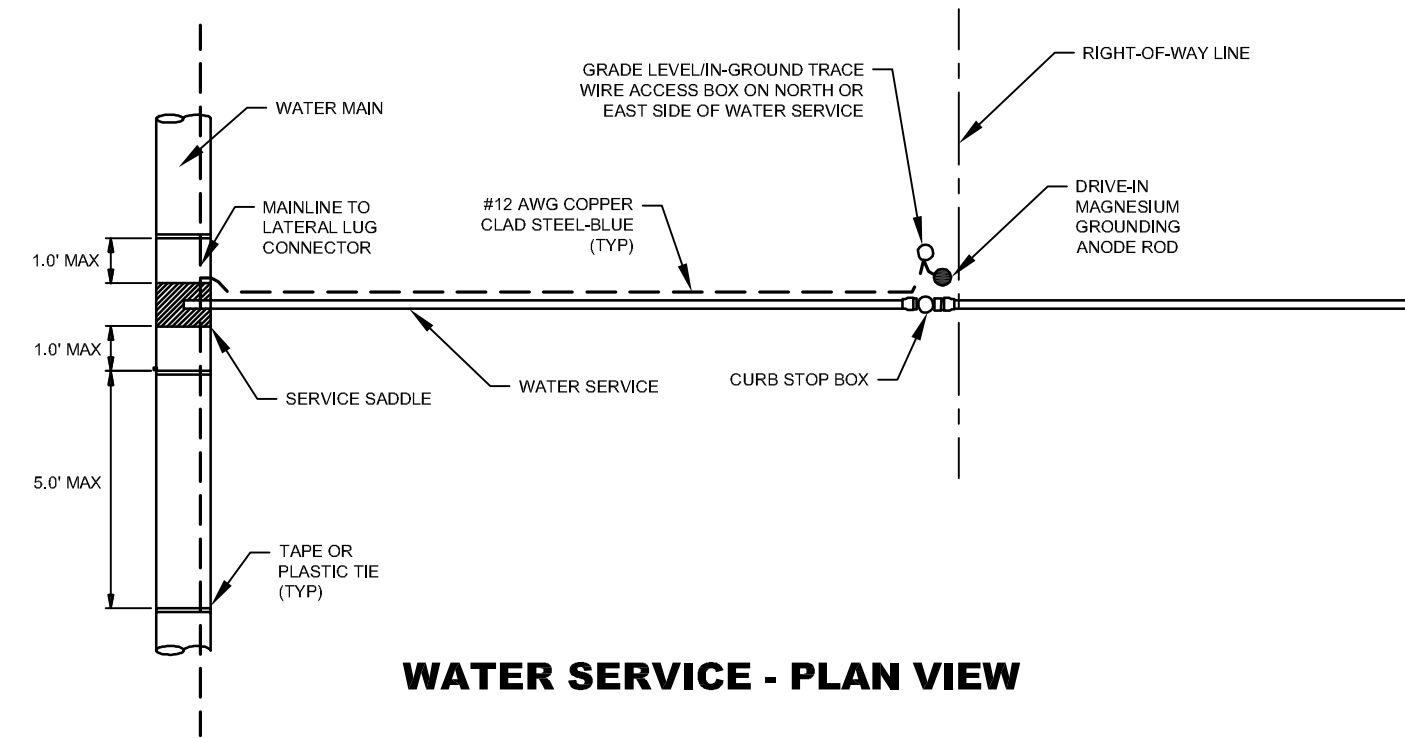
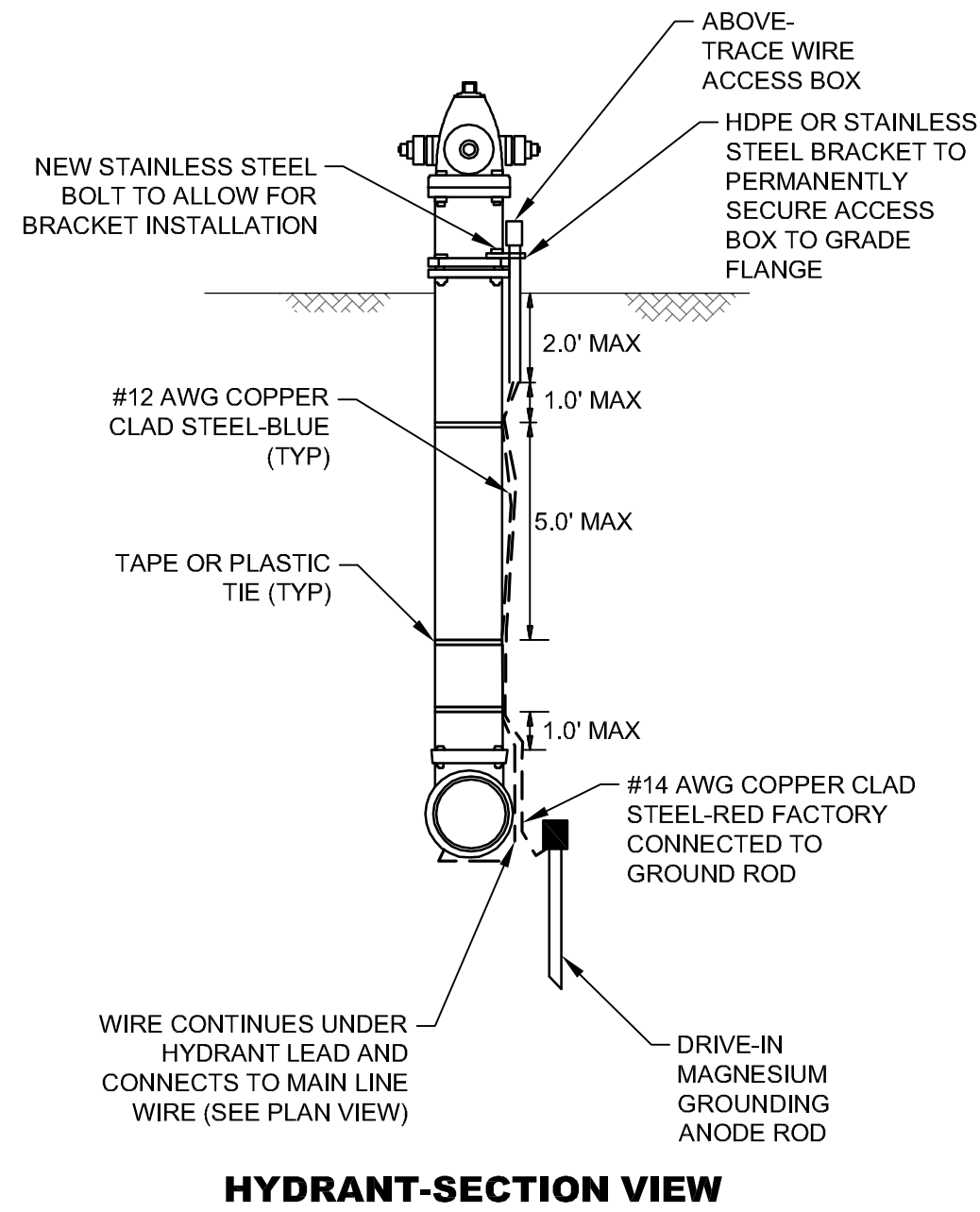
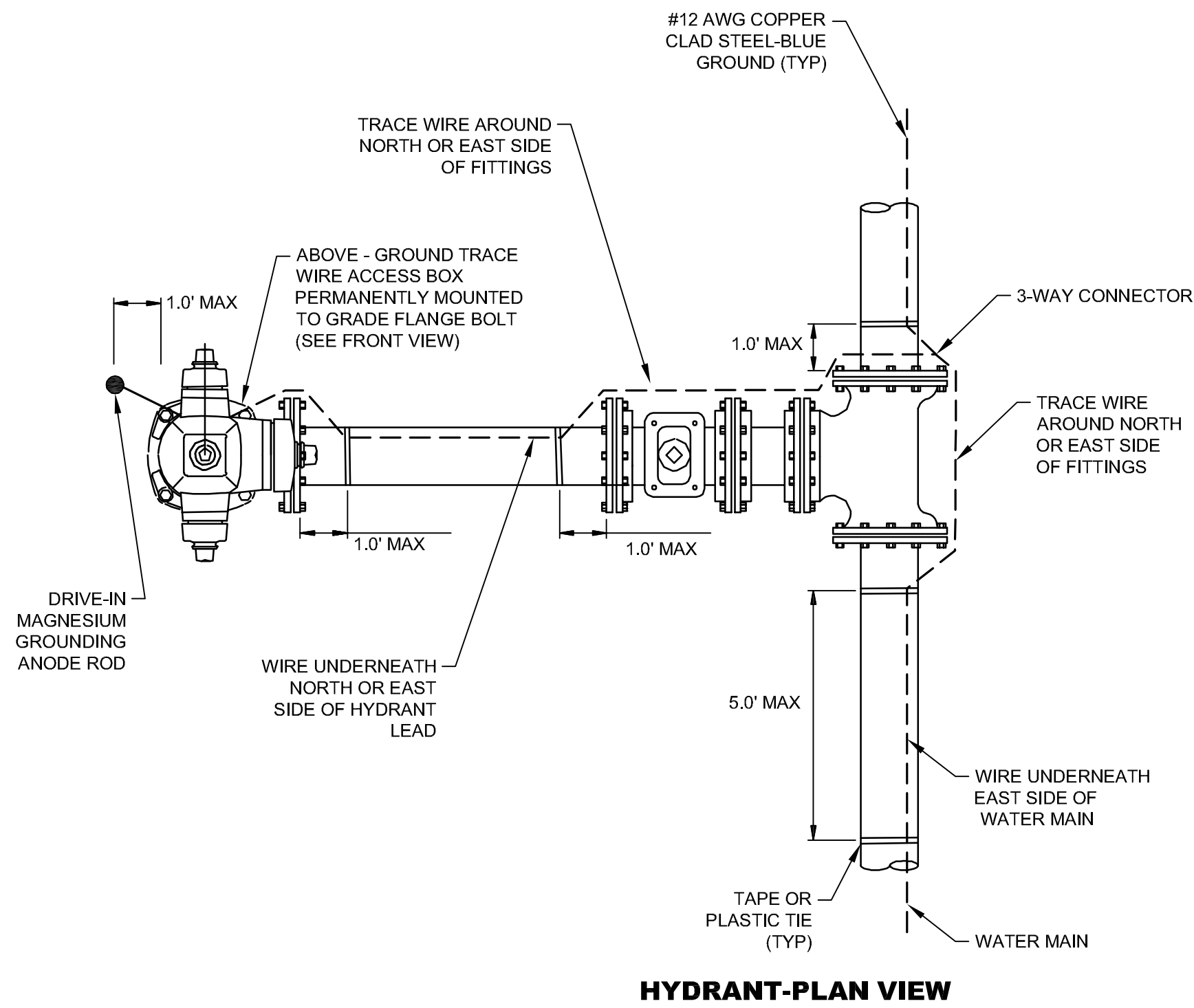
PICKHOLE DETAIL

GENERAL NOTES:

- ALL MANHOLES SHALL BE STANDARD PRECAST WITH EXTENDED BASES, UNLESS OTHERWISE DIRECTED. FLEXIBLE INLET AND OUTLET CONNECTION BOOTS REQUIRED ON ALL PIPES AND FORCE MAINS.
- ALL ELEMENTS SHALL CONFORM TO PRECAST MANHOLE SPECIFICATION. A.S.T.M. C-478 LATEST REVISION.
- PRECAST CONCRETE RINGS SHALL BE USED TO BRING MANHOLE FRAME AND COVER TO GRADE USE (11" MAX. RISE).
- MANHOLES IN PAVED AREAS SHALL BE FURNISHED WITH ADJUSTING RINGS.

NO.	DATE	DESCRIPTION	BY
SEWER INSTALLATION DETAILS			
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI			
sdw Engineering Progress 301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by: SLS	Checked by: KDW	Scale: NONE	
Date: 12/16/2019	Working No. SSD1		
Drawing No.: 1273-S015	Sheet No. 20		

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NOTE:
WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS.

NO.	DATE	DESCRIPTION	BY
TRACER WIRE DETAILS			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
 Engineering Progress			
301 Second Ave., Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by: SLS		Checked by: KDW	Scale: NONE
Date: 12/16/2019		Working No. <u> TWD </u>	
Drawing No.: 1273-S015		Sheet No. <u> 21 </u>	

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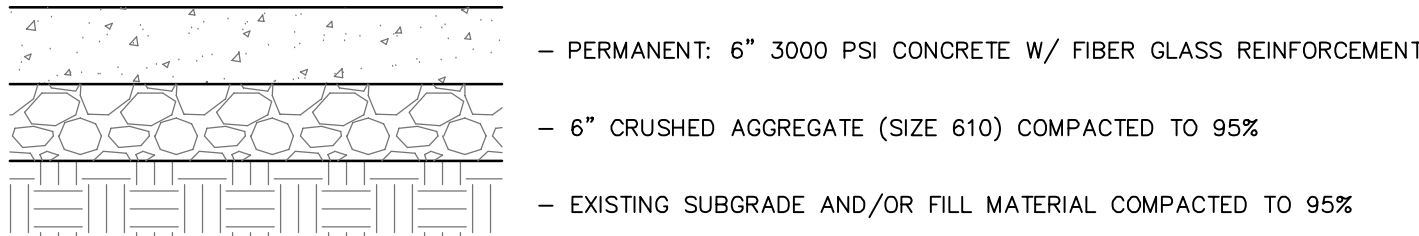
VEGETATION SCHEDULE						
EROSION CONTROL ITEMS		SEASONAL APPLICATIONS - DATES & RATES				REQUIREMENTS
		SPRING & SUMMER		FALL & WINTER		
	ITEMS	RATES	DATES	RATES	DATES	
	TOPSOIL FOR SLOPE TREATMENT (LVM)	4" THICK	MARCH 1 TO SEPTEMBER 1	4" THICK	SEPTEMBER 1 TO MARCH 1	TOPSOIL REQUIRED ON SLOPES DETERMINED BY THE ENGINEER DURING CONSTRUCTION
	STANDARD GROUND PREPARATION	PER SQ. FT.	MARCH 1 TO SEPTEMBER 1	PER SQ. FT.	SEPTEMBER 1 TO MARCH 1	GROUND PREPARATION REQUIRED ON AREAS TO RECEIVE SOLID SODDING OR SEEDING, AS APPLICABLE
	AGRICULTURAL LIMESTONE	3 TONS / ACRE	MARCH 1 TO SEPTEMBER 1	3 TONS / ACRE	SEPTEMBER 1 TO MARCH 1	LIMESTONE SHALL BE MECHANICALLY SPREAD UNIFORMLY AND INCORPORATED INTO THE SOIL PRIOR TO PLANTING
	COMBINATION FERTILIZER (13–13–13)	1000 LBS / ACRE	MARCH 1 TO SEPTEMBER 1	1000 LBS / ACRE	SEPTEMBER 1 TO MARCH 1	FERTILIZER SHALL BE MECHANICALLY SPREAD UNIFORMLY AND INCORPORATED INTO THE SOIL PRIOR TO PLANTING
	SUPER PHOSPHATE	0.5 TON / ACRE (EST)	MARCH 1 TO SEPTEMBER 1			SUPER PHOSPHATE (FOR BID ITEM PURPOSES)
	SEEDING (BERMUDA GRASS)	20 LBS / ACRE	MARCH 1 TO SEPTEMBER 1	20 LBS / ACRE	SEPTEMBER 1 TO MARCH 1	SEED REQUIRED ON DISTURBED AREAS. UNHULLED SEED MAY BE REQUIRED DURING THE DORMANT SEASON AS DIRECTED
	SEEDING (TALL FESCUE)			15 LBS / ACRE	AUGUST 15 TO MARCH 15	SEED REQUIRED IN DISTURBED AREAS
	SEEDING (CRIMSON CLOVER)			20 LBS / ACRE	AUGUST 15 TO MARCH 15	SEED REQUIRED ON DISTURBED AREA
	VEGETATIVE MATERIAL FOR MULCH	2 TONS / ACRE (EST)	MARCH 1 TO SEPTEMBER 1	2 TONS / ACRE (EST)	SEPTEMBER 1 TO MARCH 1	THE ENGINEER WILL DESIGNATE THE RATES OF APPLICABLE (SEE SUBSECTION 215–03.3)
	SOLID SODDING	PER SQ. YD.	MARCH 1 TO SEPTEMBER 1	PER SQ. YD.	SEPTEMBER 1 TO MARCH 1	SOLID SOD REQUIRED ON AREAS SPECIFIED IN THE CONTRACT OR BY THE ENGINEER
	WATERING	20 GAL / S.Y. (EST)	MARCH 1 TO SEPTEMBER 1	20 GAL. / S.Y. (EST)	SEPTEMBER 1 TO MARCH 1	TO BE USED AS DIRECTED IN THE PLANTING AND ESTABLISHING OF SOLID SOD
	INSECT PEST CONTROL	PER ACRE		PER ACRE		SEE SECTION 220
TEMPORARY EROSION CONTROL ITEMS						
	LIGHT GROUND PREPARATION	PER SQ. YD.		PER SQ. YD.		APPROXIMATELY HALF SQ.YD. STANDARD GROUND PREPARATION
	COMBINATION FERTILIZER (13–13–13)	0.25 TONS/ ACRE		0.25 TONS/ ACRE		QUANTITY BASED ON LIGHT GROUND PREPARATION
	SEEDING (BROWN TOP MILLET)	20 LBS / ACRE	APRIL 1 TO AUGUST 31			QUANTITY BASED ON LIGHT GROUND PREPARATION
	SEEDING (RYE GRASS)			25 LBS / ACRE	SEPTEMBER 1 TO MARCH 31	QUANTITY BASED ON LIGHT GROUND PREPARATION
	SEEDING (OATS)			90 LBS / ACRE	SEPTEMBER 1 TO DECEMBER 15	QUANTITY BASED ON LIGHT GROUND PREPARATION
	VEGETATIVE MATERIAL FOR MULCH	1 TON / ACRE (EST)		1 TON / ACRE (EST)		QUANTITY BASED ON LIGHT GROUND PREPARATION

- ① ALL AREAS THAT HAVE BEEN VEGETATED, UNDER THIS CONTRACT, FOR AT LEAST (60) SIXTY DAYS, SHALL RECEIVE ADDITIONAL APPLICATION(S) OF FERTILIZER(S) OF THE TYPE(S) AND RATE(S) OF APPLICATIONS AS DETERMINED BY SOIL TEST OR AS DIRECTED DURING THE GROWING SEASONS THE CONTRACT IS IN FORCE. GROUND PREPARATION WILL NOT BE REQUIRED FOR THE ADDITIONAL APPLICATIONS.
- ② PROPOSAL QUANTITIES ESTIMATED ON THE BASIS THAT 100% OF THE ACREAGE WILL BE SEEDDED.
- ③ PROPOSAL QUANTITIES ESTIMATED ON THE BASIS THAT 50% OF THE ACREAGE WILL BE SEEDDED.
- ④ QUANTITY ESTIMATED ON THE BASIS THAT 50% OF THE ACREAGE VEGETATED MAY REQUIRED TREATMENT.
- ⑤ THIS ITEM MAY BE OMITTED ON AREAS SELECTED BY THE ENGINEER.
- ⑥ BAHIAGRASS WILL NOT BE PERMITTED AS A MULCH MATERIAL.
- ⑦ PROPOSAL QUANTITIES ESTIMATED ON THE BASIS THAT 75% OF THE ACREAGE SEEDDED MAY REQUIRE TOPSOIL

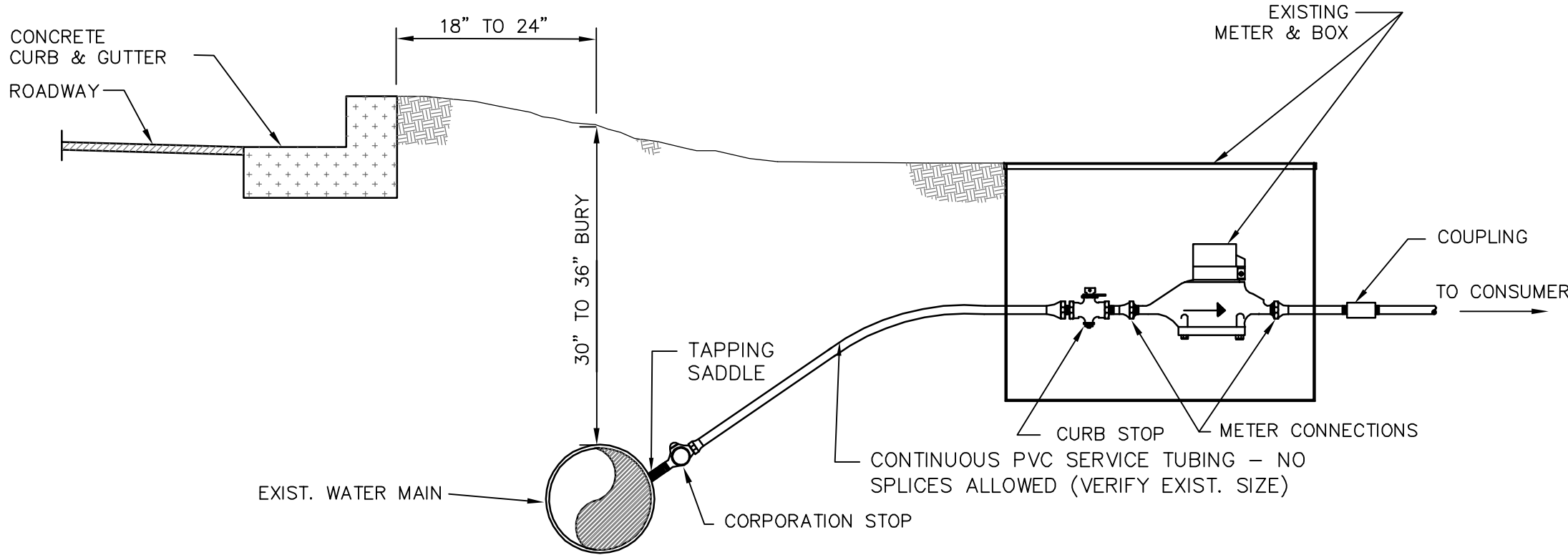
TEMPORARY EROSION CONTROL ITEMS REQUIRED FOR DETOURS

ITEM	RATE	SEASONAL LIMITATIONS
STANDARD GROUND PREPARATION	---	---
COMBINATION FERTILIZER (13-13-13)	500 LBS/ACRE	---
SEEDING (BERMUDA GRASS)	10 LBS/ACRE	---
SEEDING (TALL FESCUE)	20 LBS/ACRE	AUGUST 15 TO MARCH 15
VEGETATIVE MATERIAL FOR MULCH	2 LBS/ACRE	---

NOTE: ALL VEGETATION ON THIS PROJECT SHALL BE PAID FOR UNDER AS OUTLINED IN THE BID PROPOSAL. ITEMS SHALL BE APPLIED USING THE RATES OF APPLICATION AS SHOWN ON THIS SHEET AND WILL NOT BE MEASURED FOR SEPARATE PAYMENT.



TYPICAL CONCRETE PAVEMENT



NOTE: THIS DETAIL SHALL BE USED FOR REPAIR OF EXISTING SERVICES DAMAGED DURING CONSTRUCTION.

TYPICAL WATER SERVICE REPAIR DETAIL

NO.	DATE	DESCRIPTION	BY
VEGETATION SCHEDULE & MISC. DETAILS			
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI			
sdw Engineering Progress 301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by:	SLS	Checked by:	KDW
Date:	12/16/2019	Working No.:	VSD1
Drawing No.:	1273-S015	Sheet No.:	22

GENERAL NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL INSTALLATION SPECIFIED AND APPROVED BY THE ENGINEER. SEE THE PUMP CONTROL DETAILS FOR ELECTRICAL PLAN.
- THE BUILDING SHALL BE 26'-0" x 10'-0" WITH AN INSIDE CEILING HEIGHT OF 10'-0". CEILING SHALL BE SCREW MOUNTED 3/4" TREATED PLYWOOD, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE ROOF SHALL BE 24 GAUGE GALVALUME METAL ROOFING AND HAVE NOT LESS THAN A 4:12 PITCH.
- ALL EXTERIOR WALLS SHALL BE CONSTRUCTED OF 8"x8"x16" SPLIT FACE CMU. ALL INTERIOR WALLS SHALL BE CONSTRUCTED OF 8"x8"x16" SMOOTH FACE CMU. ALL CMU VOIDS SHALL BE FILLED. THE OWNER SHALL SELECT THE COLOR OF ALL CMU PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL CONTROLS REQUIRED FOR RADIO CONTROLLER, ALARM SYSTEM, AND PUMPS.
- THE MAIN ROOM SHALL CONTAIN A 1" FLOOR DRAIN AND ROOM SHALL BE SLOPED TO DRAIN. (NOT SHOWN ON PLAN)
- ALL EXPOSED SURFACES SHALL BE PAINTED ACCORDING TO THE PAINTING NOTES.

PAINTING NOTES:

ALL WALL SURFACES SHALL BE COATED AS FOLLOWS:

CMU:
INTERIOR:
NO PAINT REQ'D

EXTERIOR:
NO PAINT REQ'D

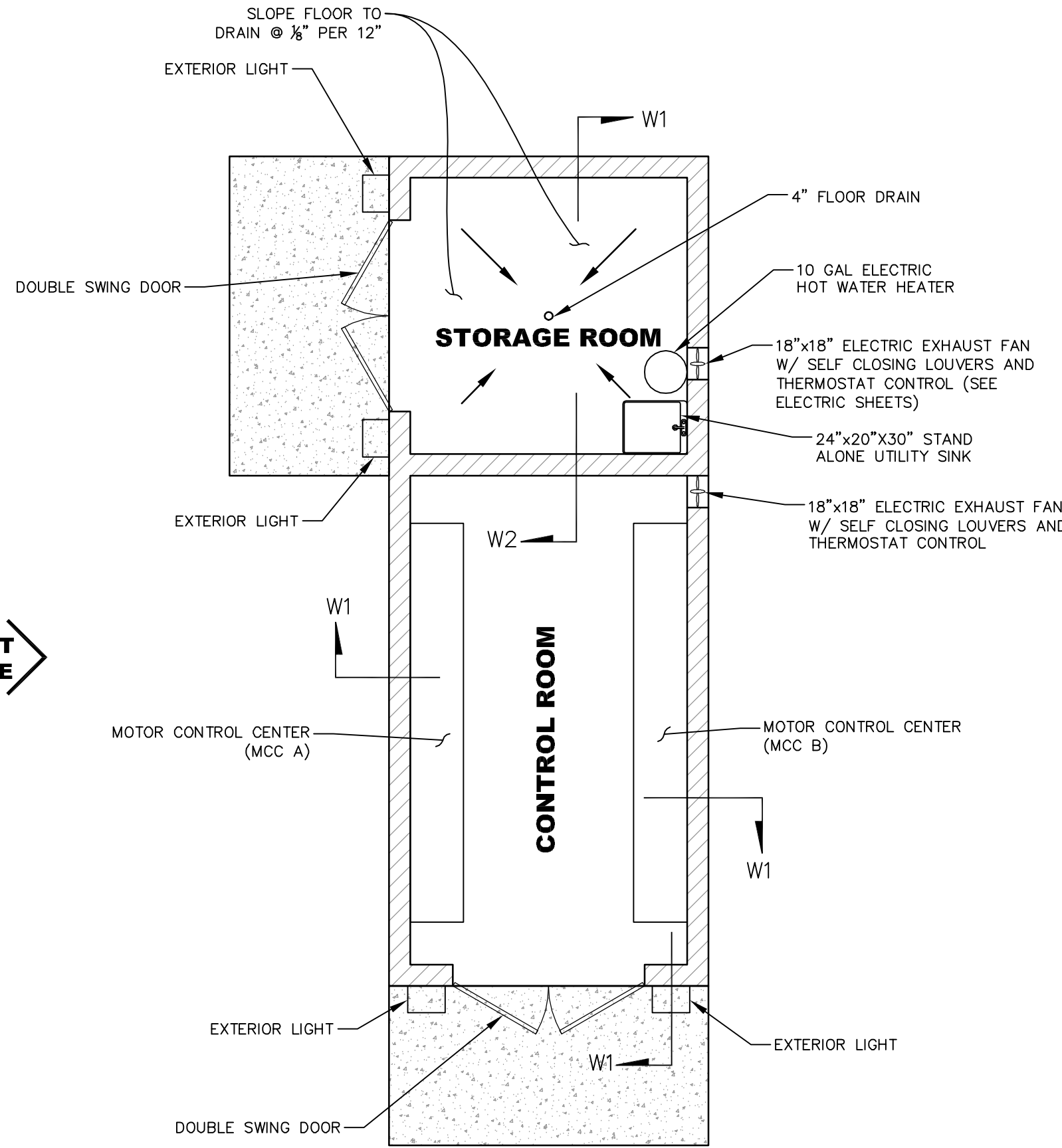
WOOD:
SURFACE PREPARATION: CLEAN AND DRY

INTERIOR (INCLUDING CEILING):
COAT 1: TNE MEC SERIES 113 TNE MEC-TUF COAT (4-6 MILS)
COAT 2: TNE MEC SERIES 113 TNE MEC-TUF COAT (4-6 MILS)

EXTERIOR:
NO PAINT REQ'D

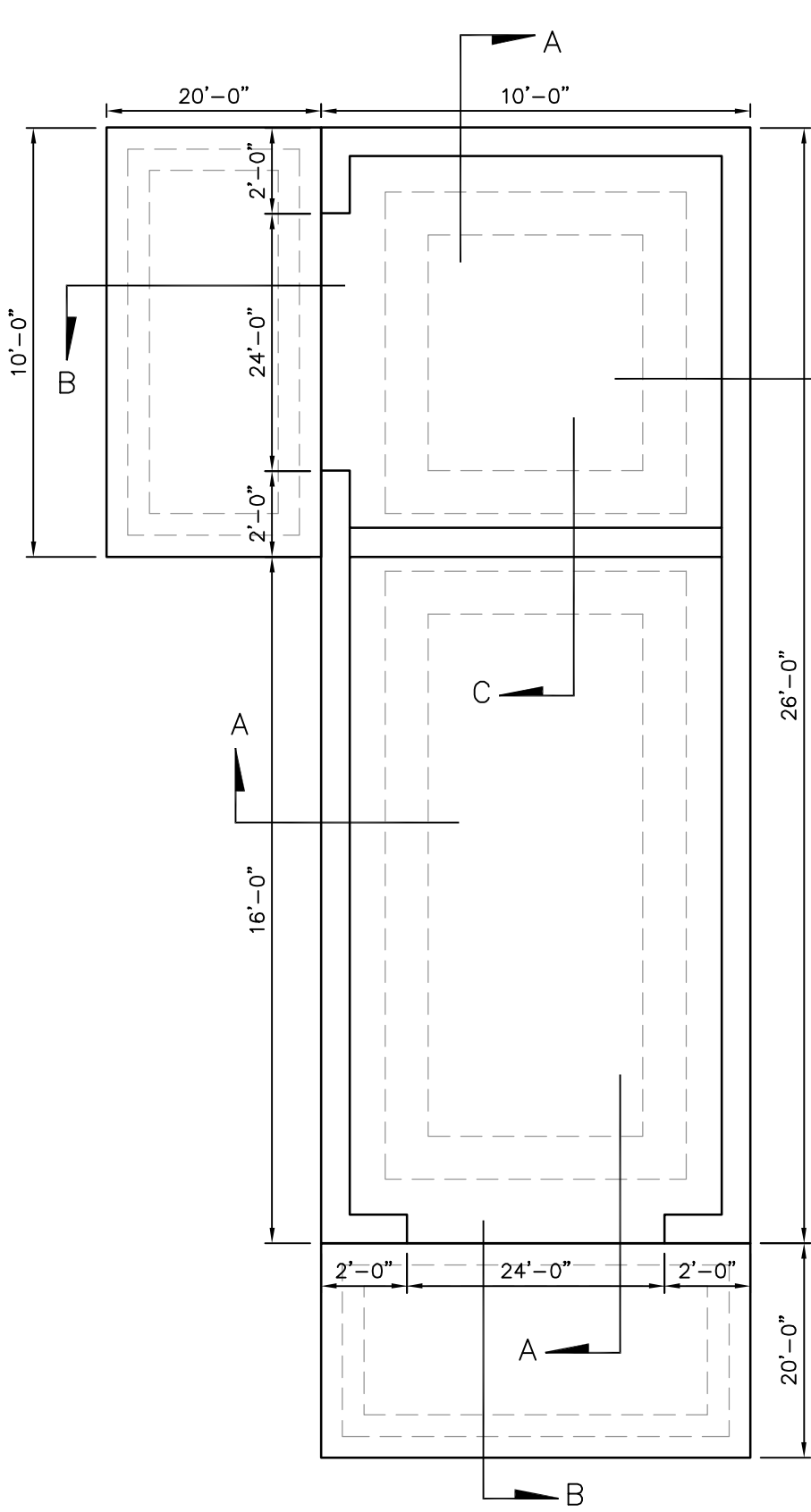
- ALL PAINT SHALL BE MANUFACTURED BY TNE MEC AS SPECIFIED OR APPROVED EQUAL.
- IF APPLICATION IS BY BRUSH OR ROLLER, MULTIPLE COATS MAY BE NECESSARY IN ORDER TO ACHIEVE MINIMUM DRY FILM THICKNESS.

LEFT
SIDE

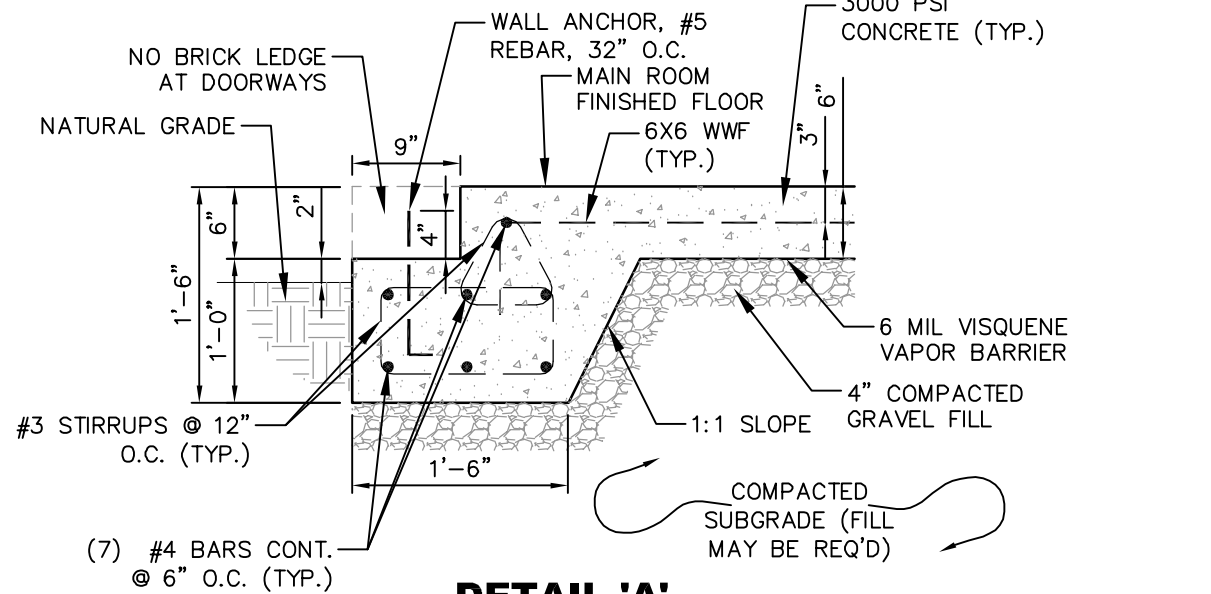


FRONT
SIDE

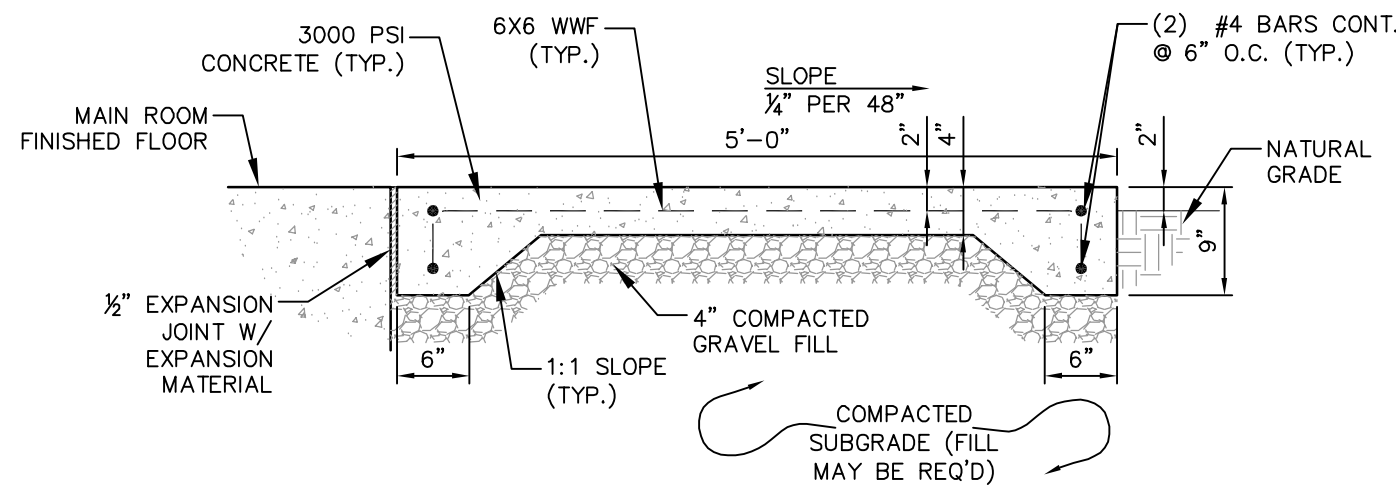
FLOOR PLAN
SCALE: 1/4" = 1'-0"



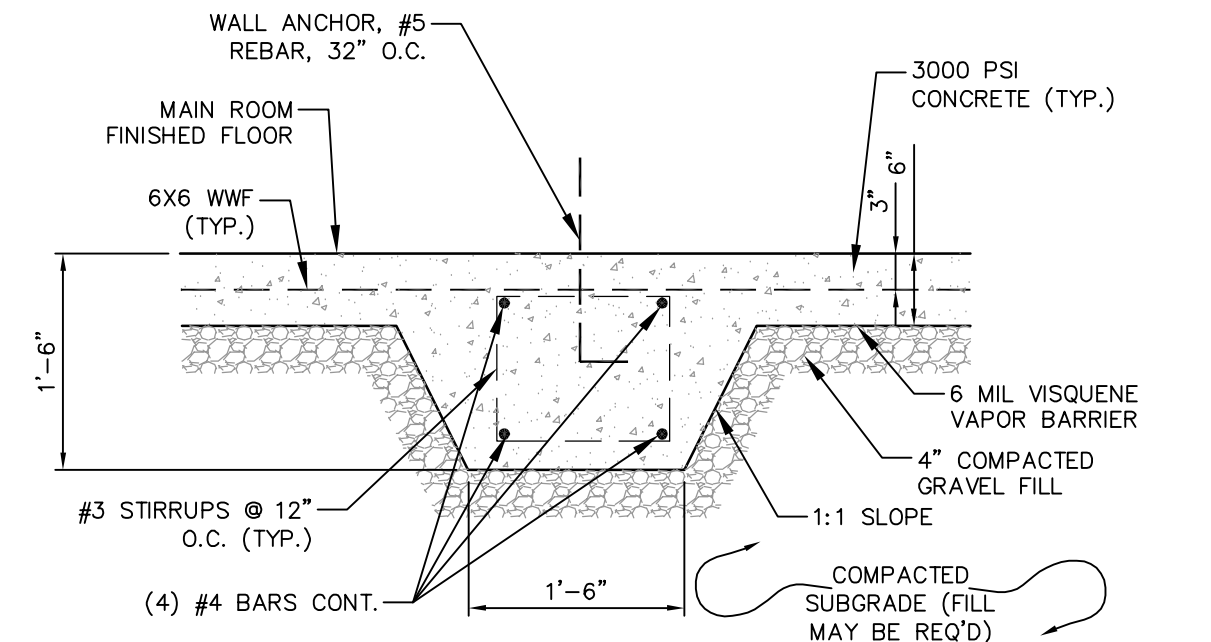
FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



DETAIL 'A'
SCALE: 3/4" = 1'-0"



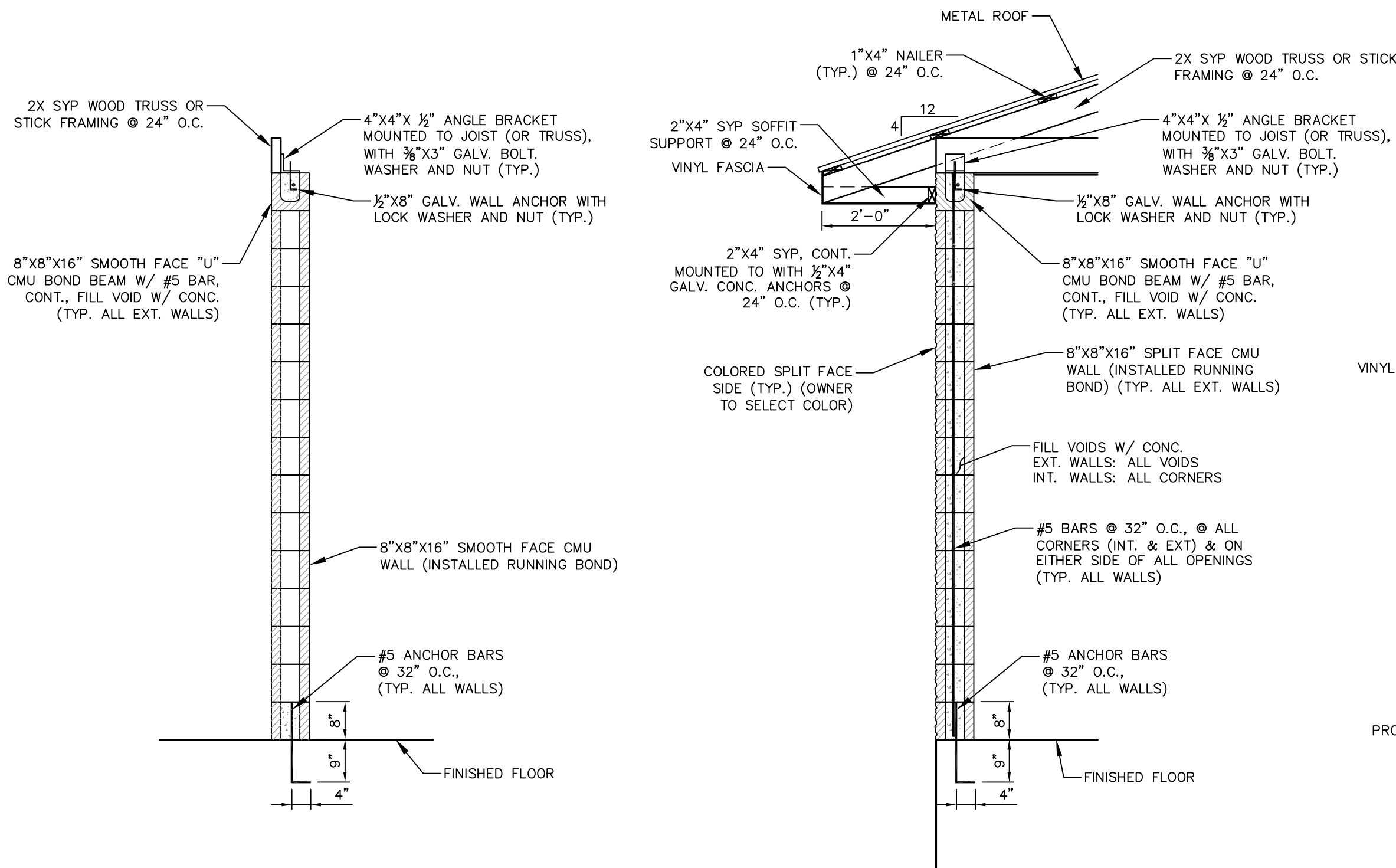
DETAIL 'B'
SCALE: 3/4" = 1'-0"



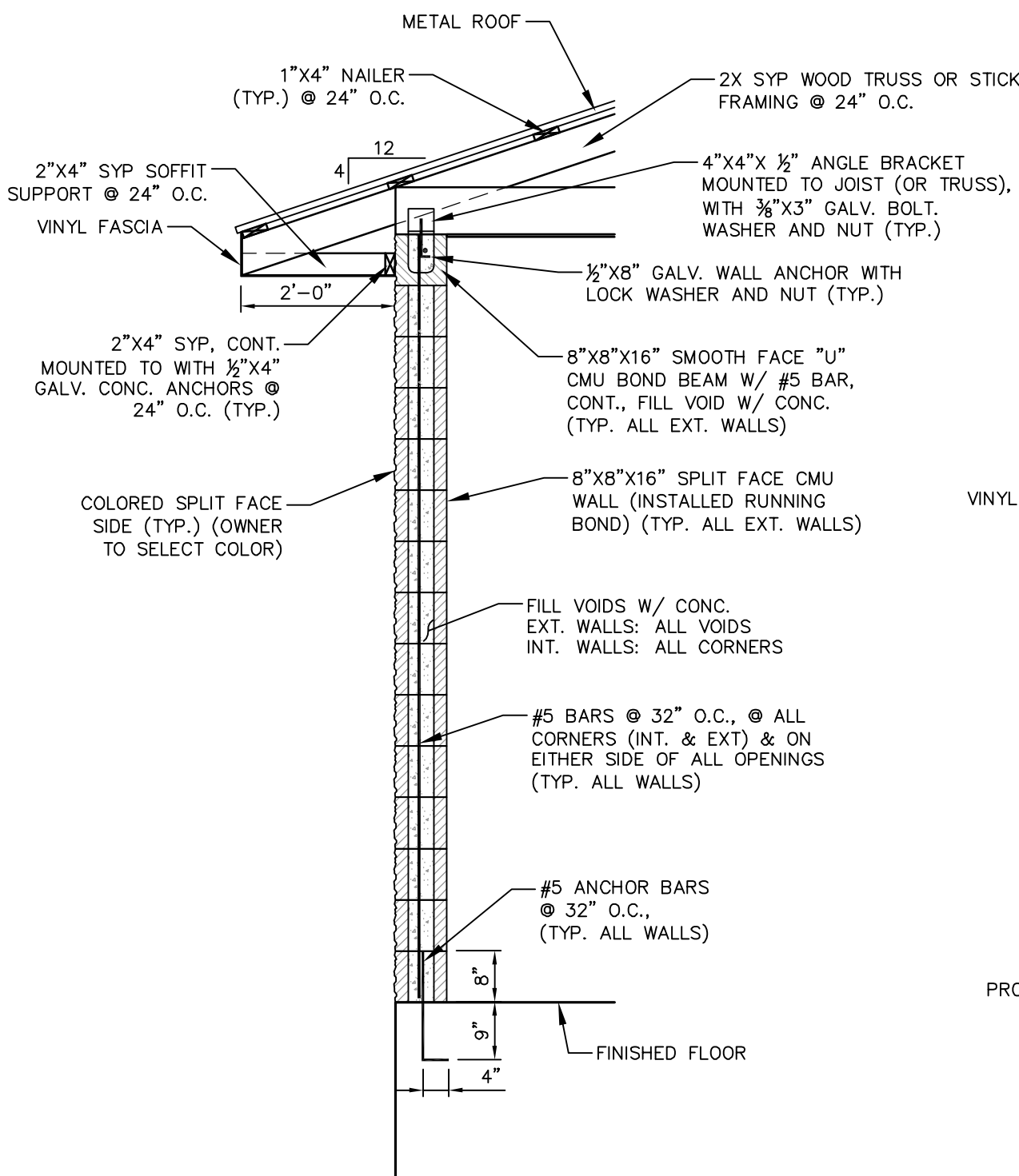
DETAIL 'C'
SCALE: 3/4" = 1'-0"

FOUNDATION NOTES:

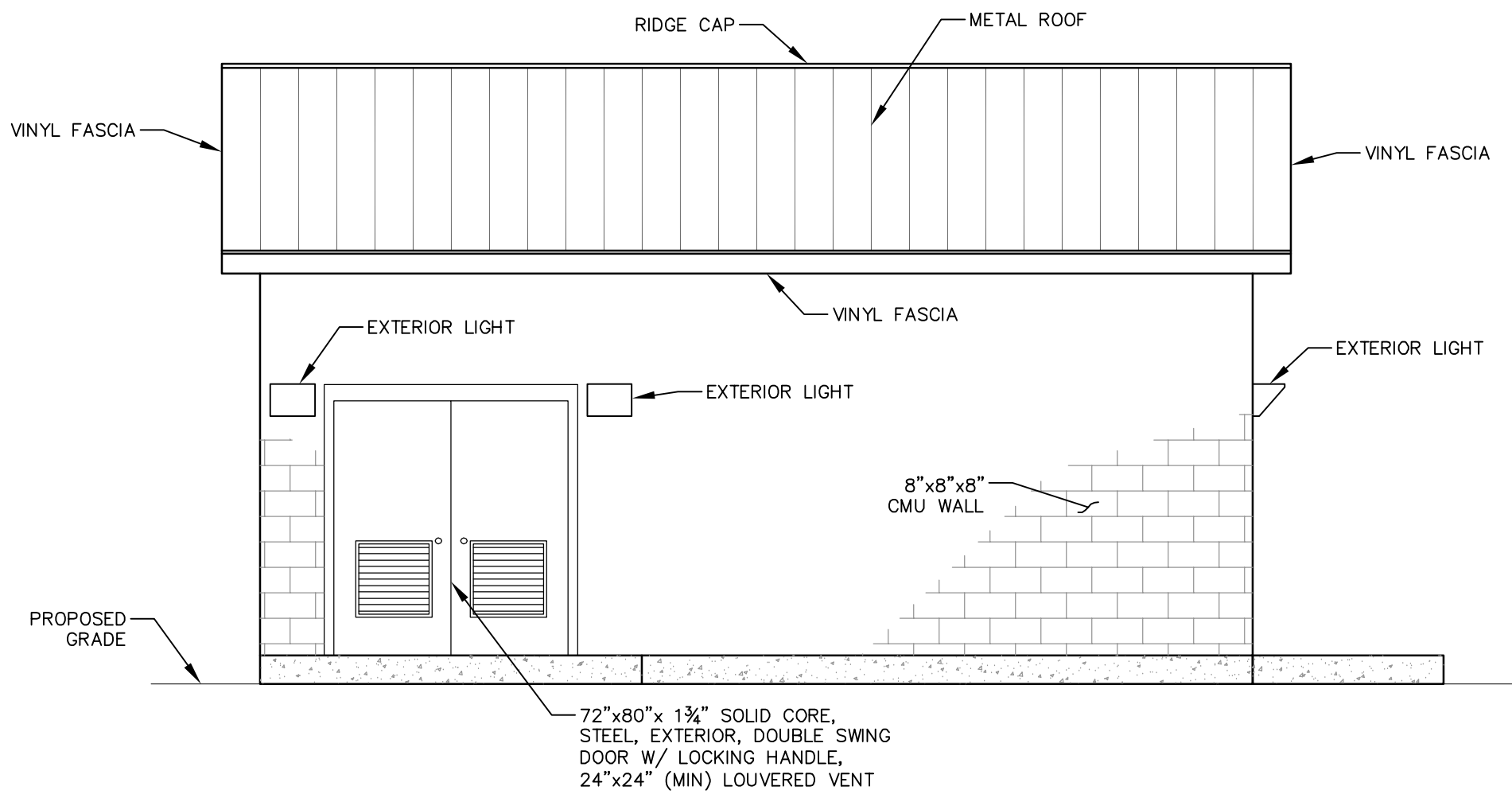
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE "AMERICAN CONCRETE INSTITUTE BUILDING CODE" (ACI 318) AND THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 1301), LATEST EDITIONS.
- ALL NORMAL WEIGHT CONCRETE (145 P.C.F.) SHALL OBTAIN A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
- REINFORCING BARS SHALL BE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO ASTM SPECIFICATION A-615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. ALL REINFORCING AND ACCESSORIES SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARDS 315-80 AND 315R-80.
- REINFORCEMENT SHALL BE CONTINUOUS ACROSS JOINTS AND AROUND CORNERS OR SPLICE BARS SHALL BE PROVIDED IN ACCORDANCE WITH ACI STANDARDS 315-80 AND 315R-80.
- CONTRACTOR SHALL COORDINATE WITH ANY AND ALL ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND CONTRACTORS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, INSERTS, SLAB DEPRESSIONS AND OTHER ITEMS RELATED TO THE CONCRETE WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR PROPER LOCATION BEFORE PLACING CONCRETE.



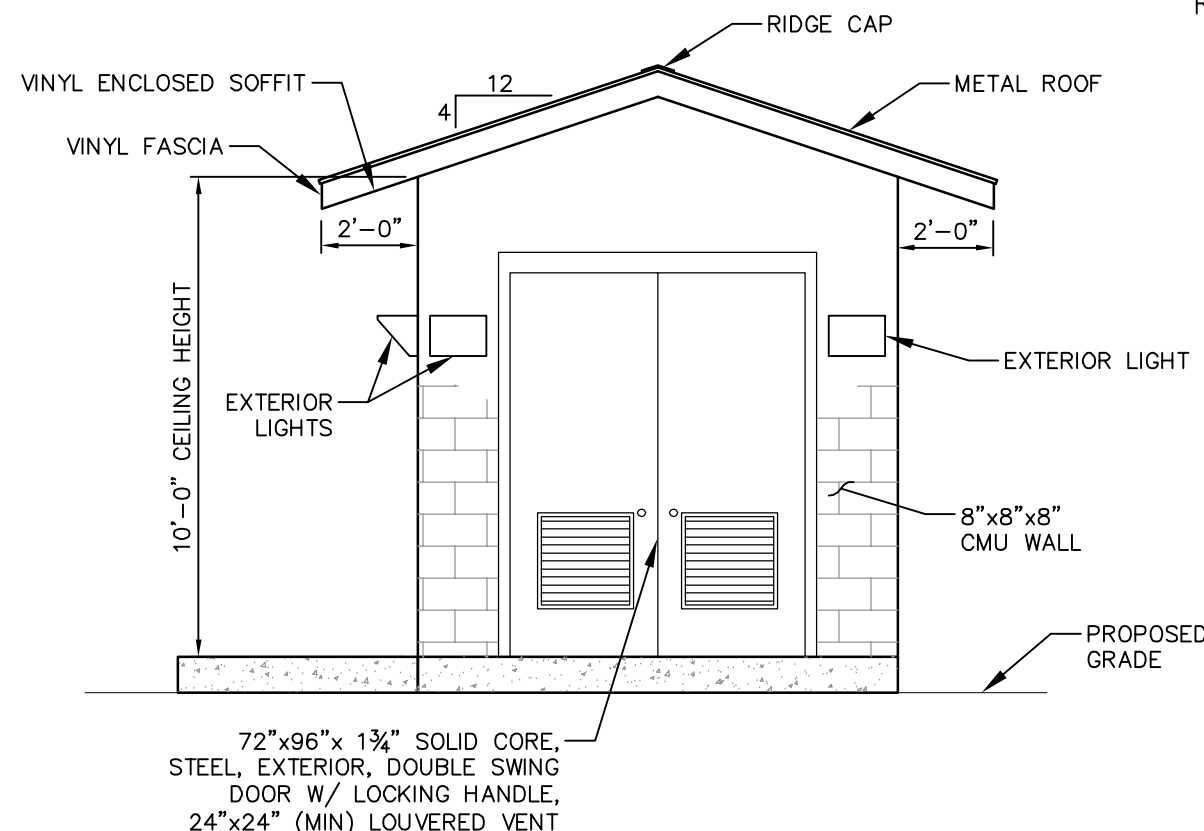
TYPICAL INT. WALL SECTION "W2"
SCALE: 1" = 2'



TYPICAL EXT. WALL SECTION "W1"
SCALE: 1" = 2'

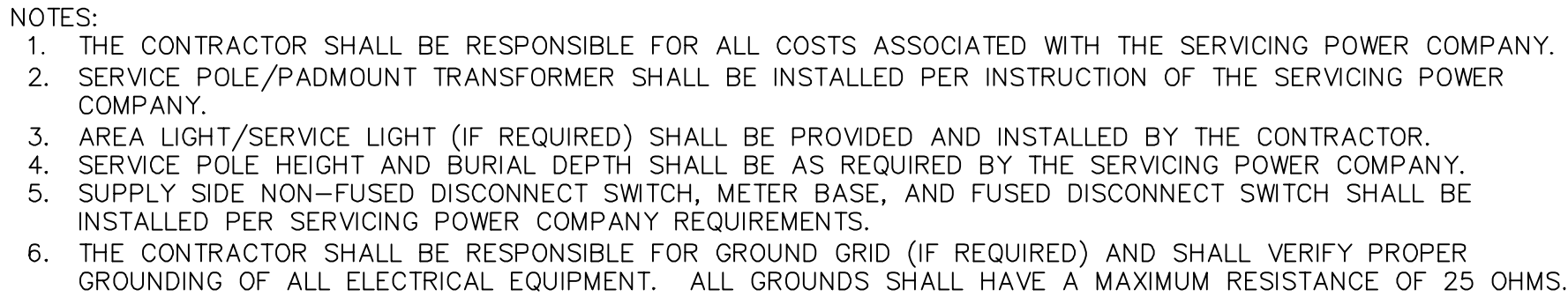


LEFT SIDE VIEW - ELEVATION
SCALE: 1/4" = 1'-0"



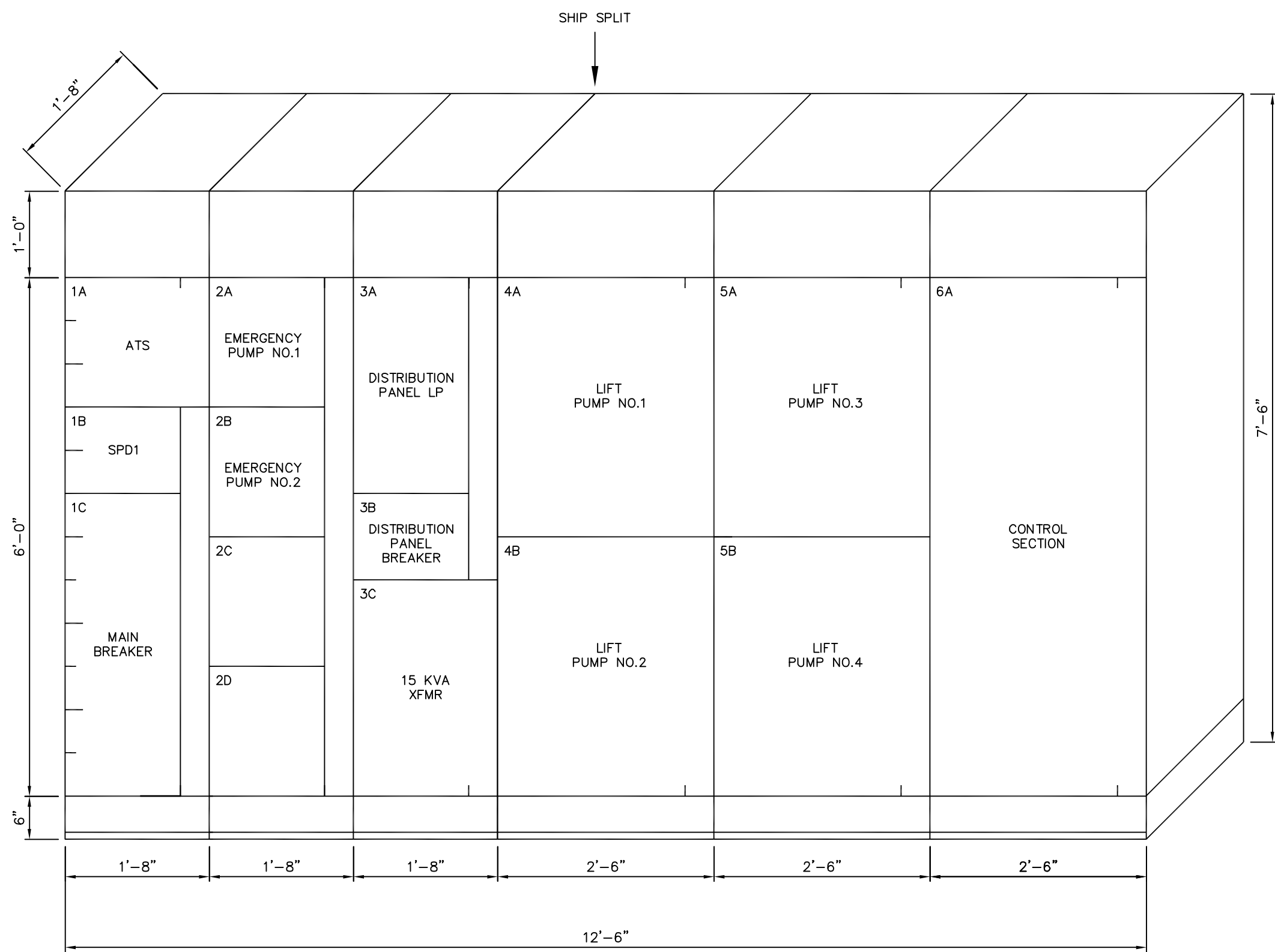
FRONT VIEW - ELEVATION
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
BUILDING DETAILS			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
sdw Engineering Progress			
301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by:	SLS	Checked by:	KDW
Date:	12/16/2019	Working No.:	BLD1
Drawing No.:	1273-S015	Sheet No.:	23



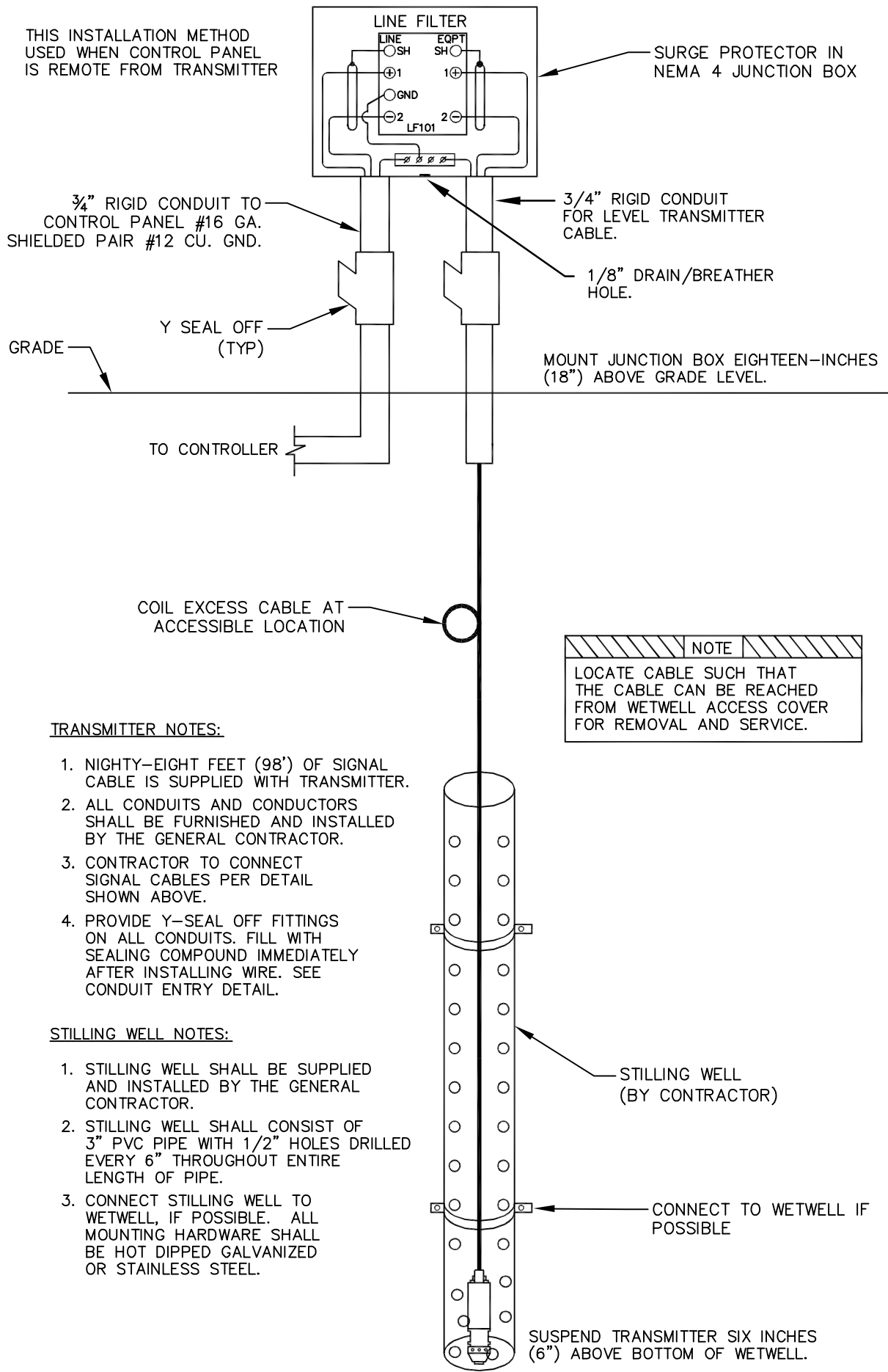
No.	DATE	DESCRIPTION	BY
CONTROL DETAILS			
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI			
Engineering Progress 301 Second Ave., Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by: CS		Checked by:	Scale: NONE
Date: 12/16/2019		Working No. ____CS-1____	
Drawing No.: 1273-S015		Sheet No. ____24____	

LEGEND		
	SURGE SUPPRESSION DEVICE –	SEE COMPONENT SPECIFICATIONS
	AUTOMATIC TRANSFER SWITCH –	SEE COMPONENT SPECIFICATIONS
	PHASE MONITOR –	SEE COMPONENT SPECIFICATIONS
	QUADRAPLEX PUMP CONTROLLER –	SEE COMPONENT SPECIFICATIONS
	QUADRAPLEX ALARM TELEMTRY MODULE –	SEE COMPONENT SPECIFICATIONS
	VARIABLE FREQUENCY DRIVE CONTROLLER –	SEE COMPONENT SPECIFICATIONS
	MOTOR MONITOR –	SEE COMPONENT SPECIFICATIONS
CT 	CURRENT TRANSFORMER –	SEE COMPONENT SPECIFICATIONS
	LINE REACTOR –	SEE COMPONENT SPECIFICATIONS
	VARIABLE FREQUENCY DRIVE –	SEE COMPONENT SPECIFICATIONS
	DUPLEX PUMP CONTROLLER –	SEE COMPONENT SPECIFICATIONS
	DUPLEX ALARM TELEMTRY MODULE –	SEE COMPONENT SPECIFICATIONS
	LEVEL METER CONTROLLER –	SEE COMPONENT SPECIFICATIONS
	EXHAUST FAN –	SEE SPECIFICATIONS
	THERMOSTAT –	SEE COMPONENT SPECIFICATIONS
	SUBMERSIBLE PRESSURE/LEVEL TRANSDUCER –	SEE COMPONENT SPECIFICATIONS
	FLOAT SWITCH –	SEE COMPONENT SPECIFICATIONS
	ANALOG SIGNAL LINE FILTER –	SEE COMPONENT SPECIFICATIONS
	COMMON ALARM LIGHT –	SEE COMPONENT SPECIFICATIONS

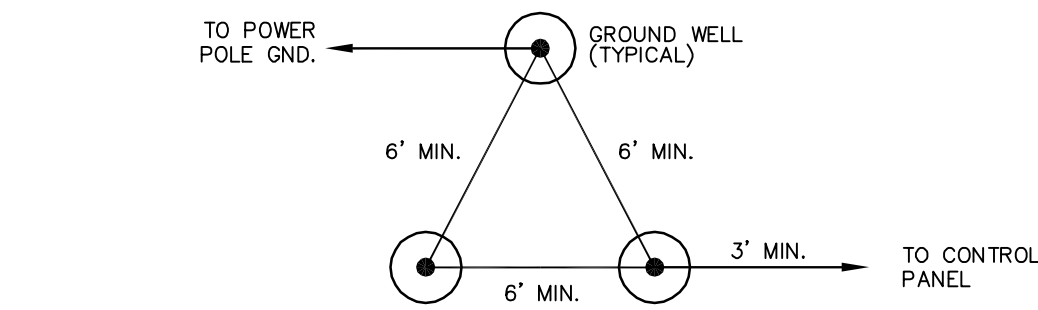


CROSSCREEK PUMP STATION MOTOR CONTROL CENTER (MCC)
PHYSICAL LAYOUT

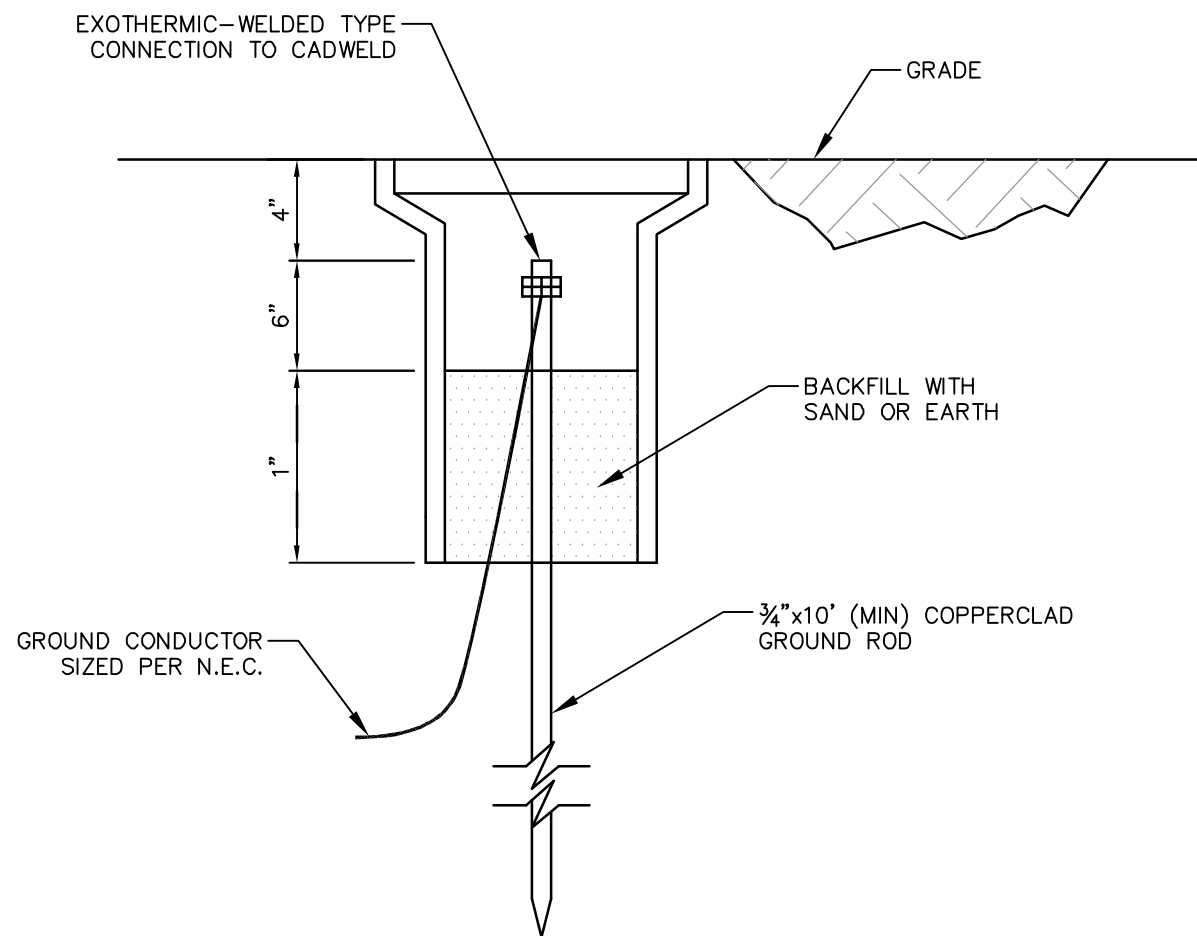
PANEL LP SCHEDULE											
CIRCUIT NUMBER	WIRE SIZE	BREAKER SIZE	DESCRIPTION OF LOAD	LOAD	KVA PER PHASE		LOAD	DESCRIPTION OF LOAD	BREAKER SIZE	WIRE SIZE	CIRCUIT NUMBER
					A	B					
1	#12	20A	CONTROL POWER					BUILDING INTERIOR LIGHTING	20A	#12	2
3	#12	20A	BUILDING EXTERIOR LIGHTING					BUILDING INTERIOR RECEPTACLES	20A	#12	4
5	#12	20A	BUILDING EXTERIOR RECEPTACLES					BATTERY CHARGER	20A	#12	6
7	#12	20A	SITE LIGHTING					SPARE	20A	#12	8
9	#12	20A	SPARE					PANELBOARD MAIN BREAKER	100A	#4	10
11	#12	20A	SPARE					PANELBOARD MAIN BREAKER	100A	#4	12
POWER PANEL LP LOCATED IN MOTOR CONTROL CENTER			TOTAL KVA				SERVICE CHARACTERISTICS: 120/240V - 1 PHASE - 3 WIRE - 60 Hz. 125 AMP. MAIN BREAKER WITH 100 AMP. BUS PROVIDE GROUND BUS				
			GRAND CONNECTED TOTAL KVA								



SUBMERSIBLE PRESSURE/LEVEL TRANSMITTER (SPLT)
INSTALLATION DETAIL



GROUND DETAIL OVERVIEW



- GROUNDING NOTES:
- GROUND THE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 250 ALONG WITH ANY LOCAL AND STATE CODES. CONDUIT WORK, BUILDINGS, FENCES, MOTORS, PANELBOARDS, AND ALL ELECTRICAL EQUIPMENT ARE TO BE EFFECTIVELY AND PERMANENTLY GROUND.
 - FEDER CONDUITS SHALL PROVIDE A GOOD PATH TO SYSTEM GROUND.
 - GROUNDING SYSTEM RESISTANCE TO GROUND OF 25 OHMS OR LESS SHALL BE CONSIDERED AS THE MINIMUM AND A RESISTANCE OF 5 OHMS OR LESS SHALL BE THE GOAL.
 - PROVIDE CERTIFIED TEST REPORTS OF GROUND RESISTANCE.

SINGLE GROUND WELL
DETAIL FOR GROUND GRID
(TYPICAL OF THREE)

NO.	DATE	DESCRIPTION	BY
CONTROL DETAILS			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
			
301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by: CS		Checked by:	Scale: NONE
Date: 12/16/2019		Working No. <u>CS-2</u>	
Drawing No.: 1273-S015		Sheet No. <u>25</u>	

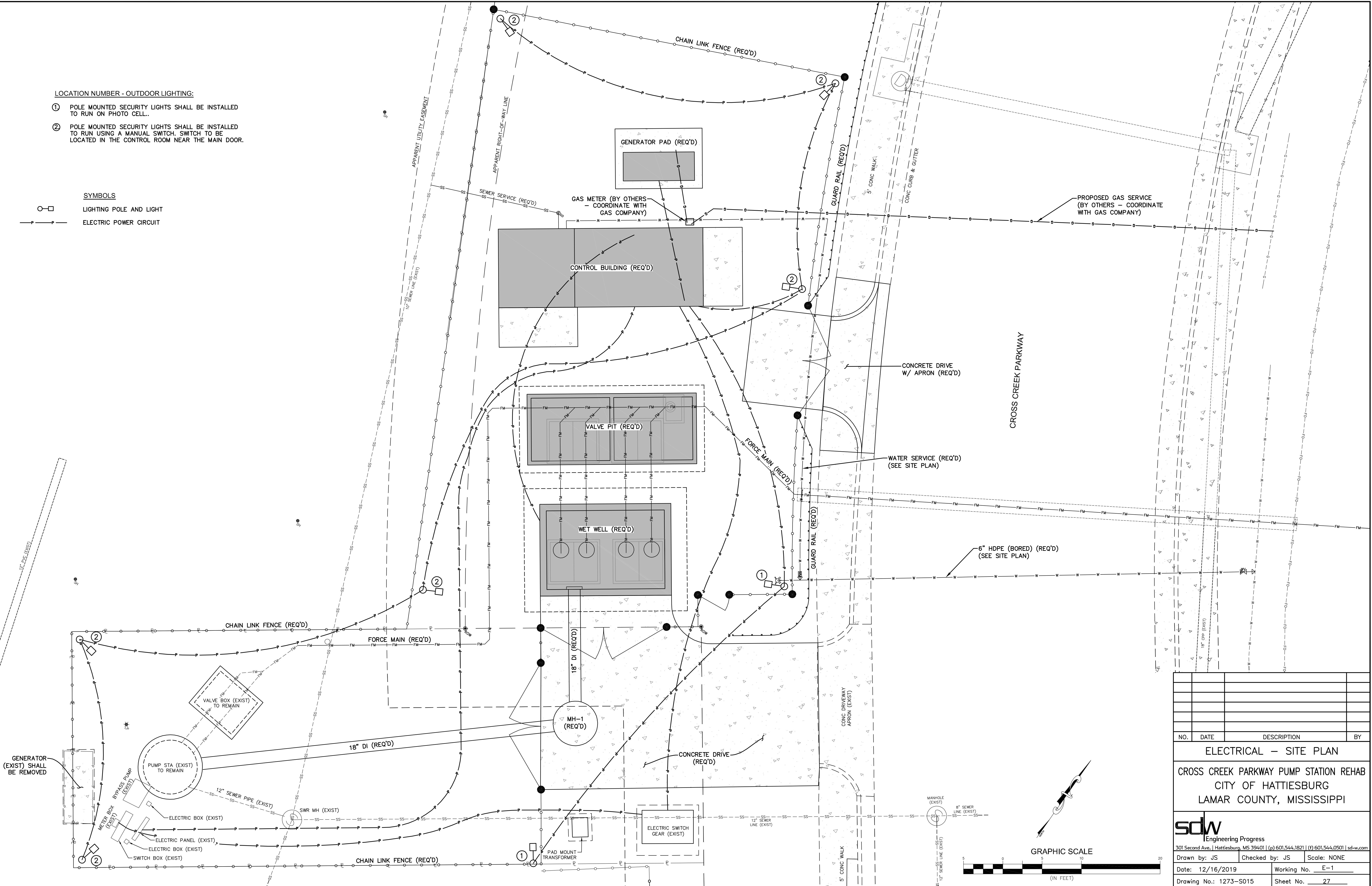
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LOCATION NUMBER - OUTDOOR LIGHTING:

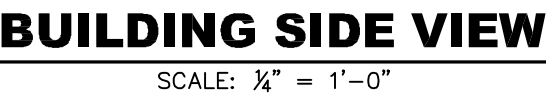
- ① POLE MOUNTED SECURITY LIGHTS SHALL BE INSTALLED TO RUN ON PHOTO CELL.
- ② POLE MOUNTED SECURITY LIGHTS SHALL BE INSTALLED TO RUN USING A MANUAL SWITCH. SWITCH TO BE LOCATED IN THE CONTROL ROOM NEAR THE MAIN DOOR.

SYMBOLS

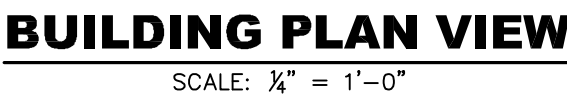
- LIGHTING POLE AND LIGHT
- ELECTRIC POWER CIRCUIT

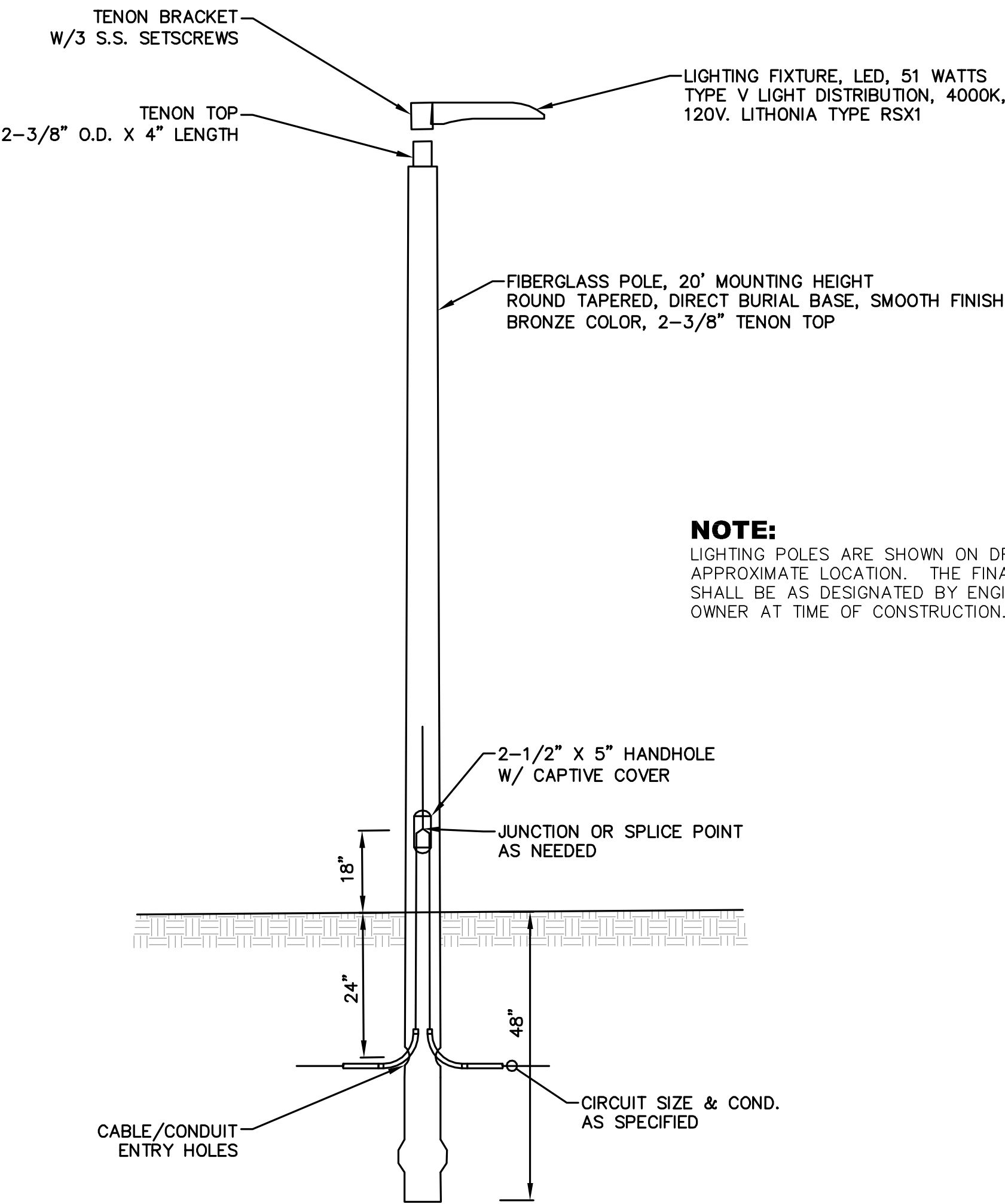


NO.	DATE	DESCRIPTION	BY
ELECTRICAL — SITE PLAN			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
sdw Engineering Progress			
301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
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Date: 12/16/2019	Working No. E-1		
Drawing No.: 1273-S015	Sheet No. 27		



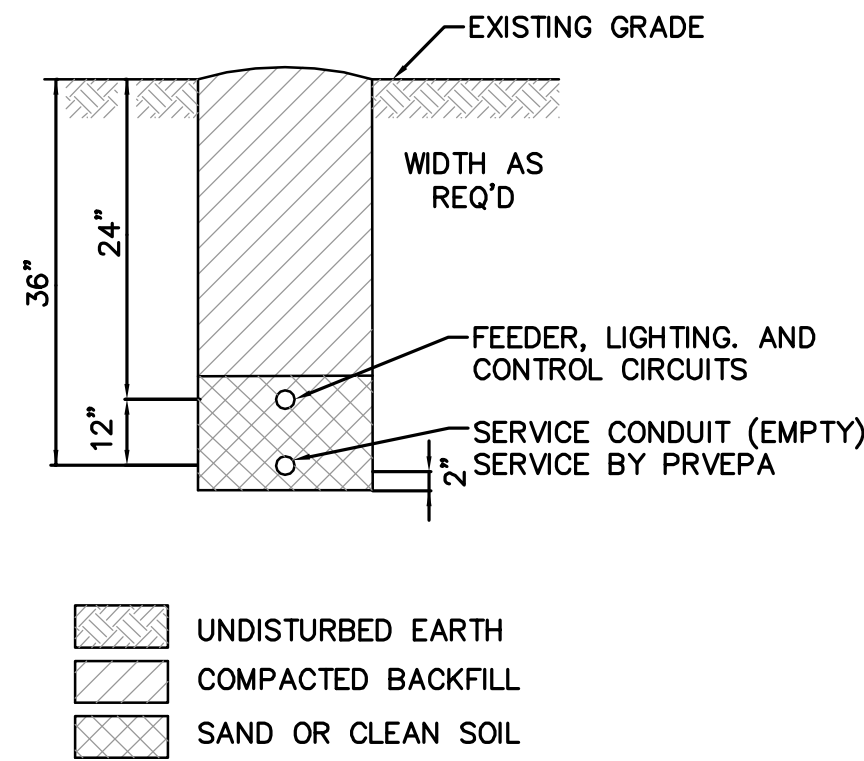
ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.	COMMENTS
WATER HEATER	ELECTRIC, 10 GAL. CAPACITY 120V, 1 PH.	AMERICAN STANDARD, RHEEM, AO SMITH, OR APPROVED EQUAL		PLUG CONNECTED TO 20A WALL OUTLET.
EXHAUST FAN	HAZARDOUS LOCATION, THRU WALL VERTICAL MOUNTED, 16"x16", CORROSION RESISTANT, 12" STAINLESS STEEL BLADES, SELF CLOSING EXTERIOR SHUTTERS, INTERIOR FAN BLADE GUARD, DIRECT DRIVE, 120V, 1 PH., 600 CFM, PLUG CONNECTED, WITH WALL MOUNTED MANUAL THERMOSTAT CONTROL.	DAYTON, OR APPROVED EQUAL	DAYTON CAT NO. 32ZN53, WALL SHUTTER CAT. NO. 4C556, INTAKE GUARD CAT. NO. 1WB78	
WALL MOUNTED PE CONTROL	ENCLOSED, RAIN TIGHT POLY HOUSING, WITH 3/4" THREADED NIPPLE, UV RESISTANT, 1 F.C. TURN-ON, 5 F.C. TURN-OFF, 120V, 1000VA	FISHER PIERCE OR APPROVED EQUAL	FT SERIES	ALL WALL PACK LIGHTS ARE ON PHOTO CONTROL CIRCUIT

[illegible]



LIGHT POLE & FIXTURE

LIGHTING POLE SCHEDULE				
POLE ID	DESCRIPTION	MANUFACTURER	CAT. NO.	COMMENTS
1	FIBERGLASS, ROUND TAPERED, DK. BRONZE COLOR, 20' MOUNTING HEIGHT, SMOOTH FINISH, 2-3/8" TENON TOP, 2-1/2"X5" HANDHOLE WITH COVER	LITHONIA	RTFDB-24-6-7X-T20-DOB	THESE LIGHTS ARE ON COMMON PHOTO CONTROL MOUNTED ON OUTSIDE OF BUILDING AND ARE FULL TIME ACTIVE.
2	SAME AS 1 ABOVE	LITHONIA	SAME AS ABOVE	THESE LIGHTS ARE ON A SEPARATE CIRCUIT AND SWITCH INSIDE THE BUILDING AND ARE FOR MAINTENANCE USE ONLY TYPICALLY LEFT OFF.



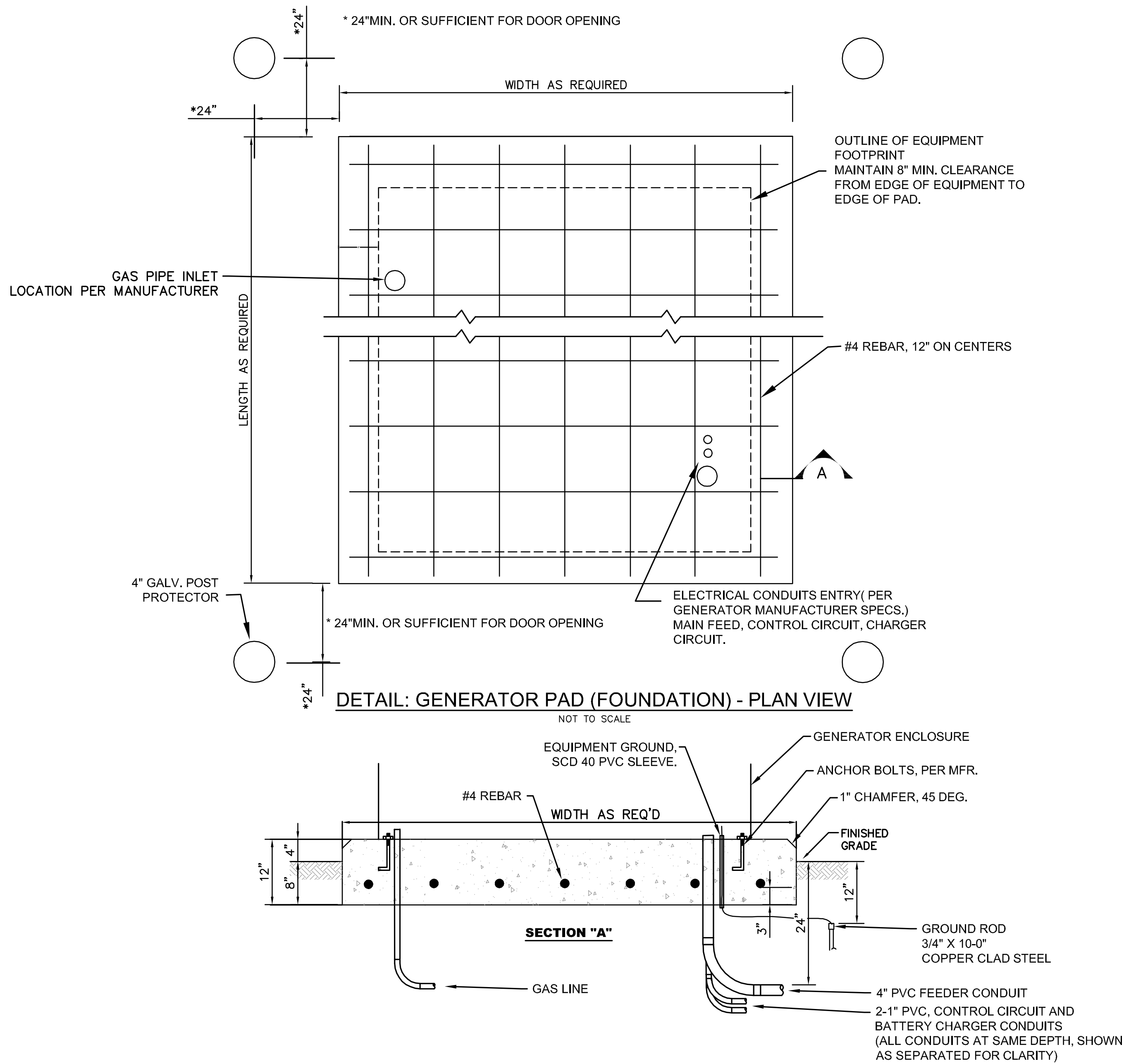
DETAIL : TRENCHING
SCALE: NOT TO SCALE

TRENCHING NOTES:

1. PROVIDE MINIMUM 36" COVER OVER SERVICE CONDUIT AND MINIMUM 24" OVER LOW VOLTAGE FEEDER, LIGHTING AND CONTROL CABLES. DEPTHS SPECIFIED ARE TO FINISHED GRADE. OVER-EXCAVATE TRENCHES AS NECESSARY TO ALLOW FOR SAND BEDDING OR LOOSE AND SANDY SOILS.
2. PROVIDE SELECT BACKFILL OF CLEAN SAND FREE OF ROCKS AND SHARP OBJECTS.
3. PROVIDE MINIMUM 2" BACKFILL UNDER CABLES AND CONDUITS.
4. BACKFILL IN 6" LIFTS, TAMPING EACH LIFT.

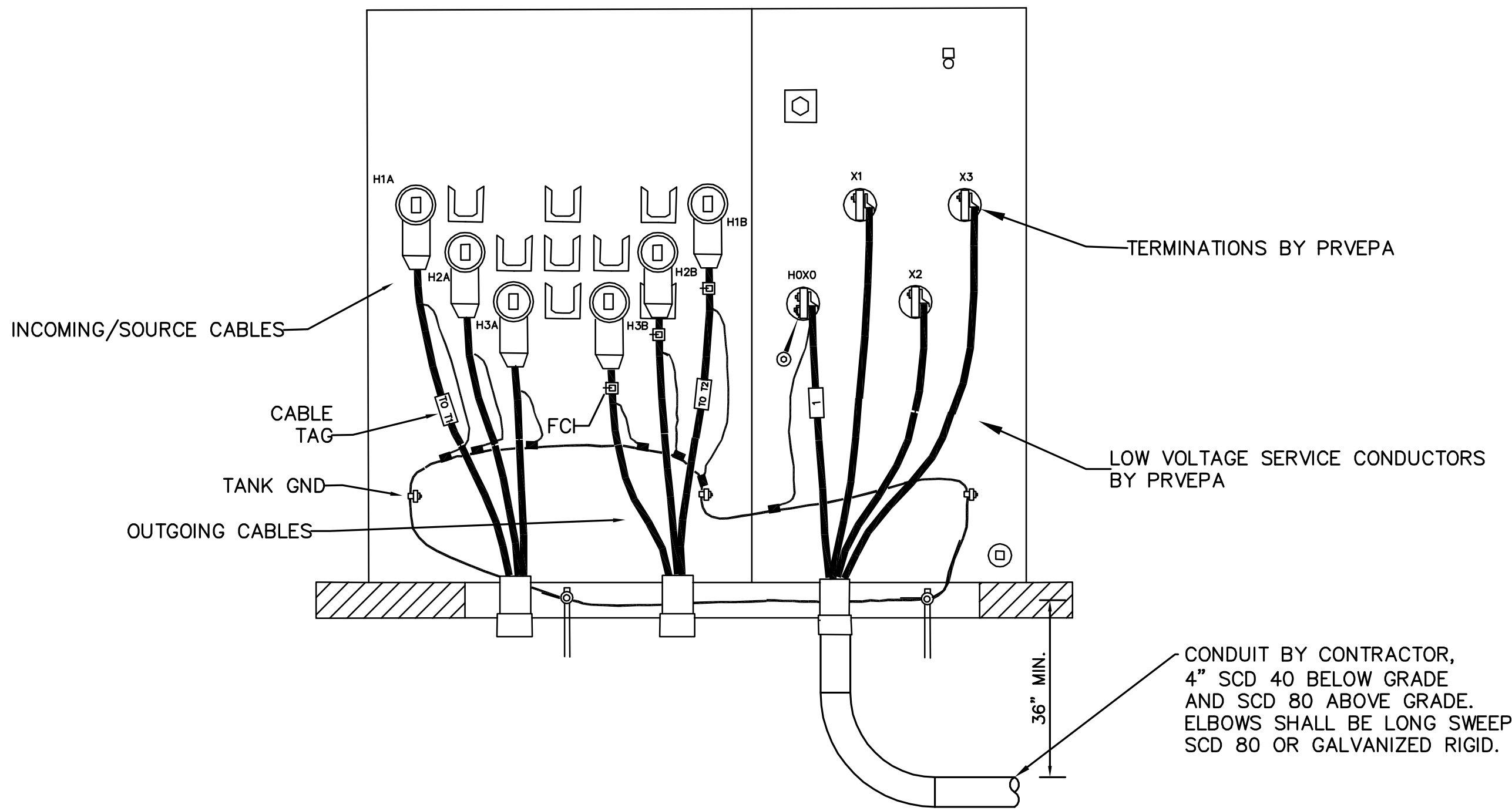
NO.	DATE	DESCRIPTION	BY
LIGHTING – DETAILS AND TRENCHING			
CROSS CREEK PARKWAY PUMP STATION REHAB			
CITY OF HATTIESBURG			
LAMAR COUNTY, MISSISSIPPI			
sdw Engineering Progress 301 Second Ave, Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
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Date:	12/16/2019	Working No.	E-3
Drawing No.:	1273-S015	Sheet No.	29

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GENERATOR PAD NOTES:

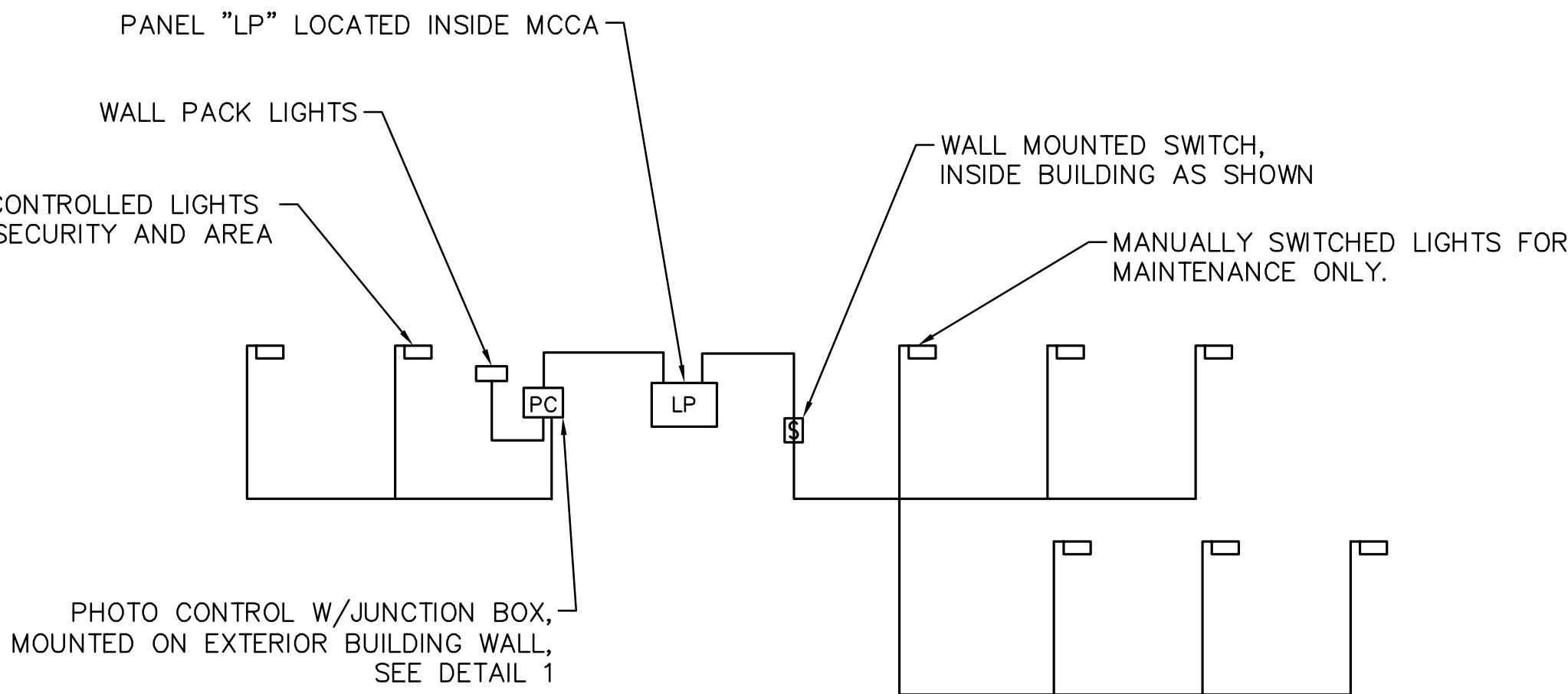
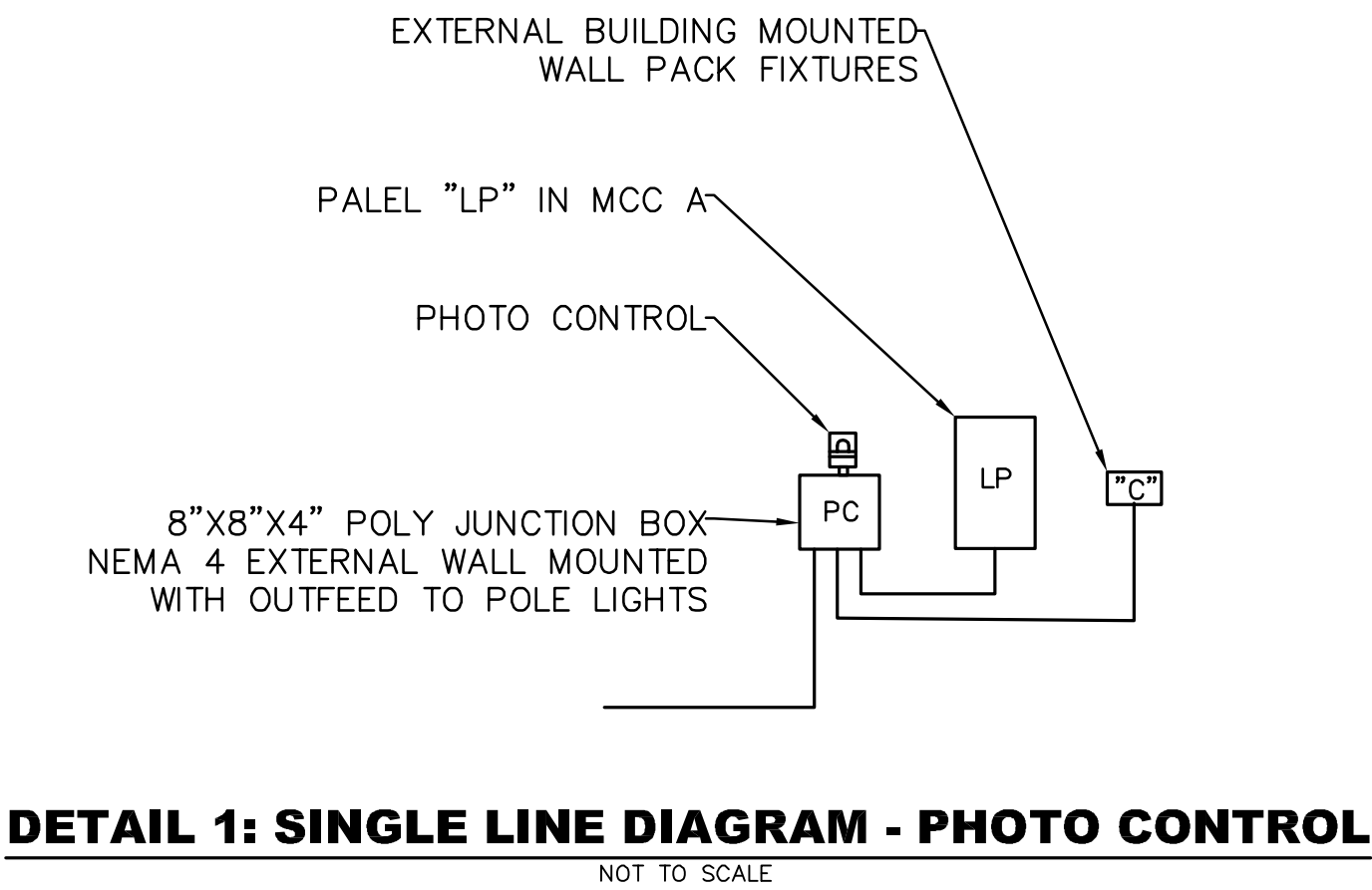
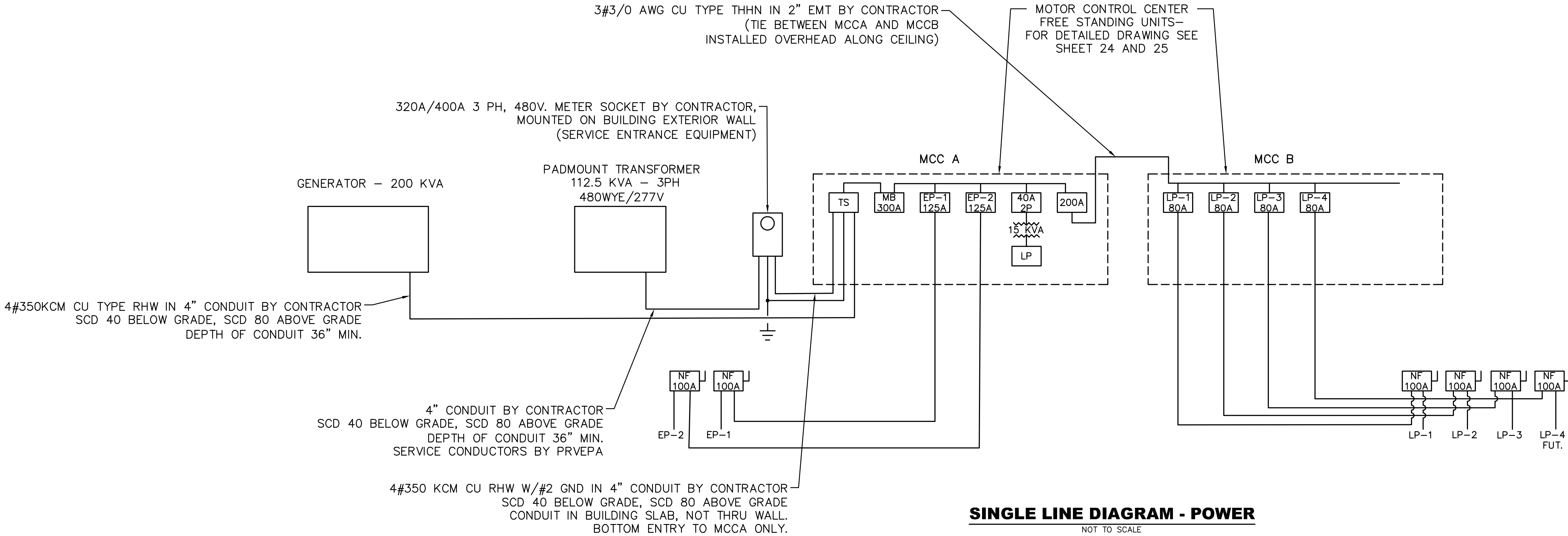
- CONCRETE SHALL BE 3,500 # MIX., 3/4" MAXIMUM SIZE AGGREGATE. CONCRETE SHALL CURE A MINIMUM OF 7 DAYS BEFORE PLACING EQUIPMENT.
- REINFORCING STEEL, ASTM-A615 GRADE 60, PLACE APPROXIMATELY 12" O.C. EACH WAY AND SECURELY TIED TOGETHER.
- MINIMUM COVER OVER REINFORCING STEEL 3 INCHES.
- WOOD FLOAT FINISH, LEAVING NO DEPRESSIONS. FINISH SHALL BE LEVEL. PAD SHALL BE SQUARE WITH ADJACENT BUILDINGS. ORIENT PAD AS SPECIFIED BY OWNER AND ENGINEER. ACTUAL LOCATION AND ELEVATION TO BE AS SPECIFIED BY OWNER AND ENGINEER.
- INSTALL SCD, 40 PVC PIPE SLEEVE AROUND BARE GROUND WIRE THROUGH PAD.
- INSTALL ANCHOR BOLTS PER MANUFACTURER INSTRUCTIONS.
- GALVANIZED POST PROTECTORS (REQ'D)



SERVICE CONDUIT AT PADMOUNT TRANSFORMER NOTES:

- CONTRACTOR SHALL INSTALL SERVICE CONDUIT AS INDICATED FROM THE PADMOUNT TRANSFORMER TO THE METER SOCKET. THIS INCLUDES INSTALLING THE CONDUIT UP INTO THE LOW VOLTAGE COMPARTMENT OF THE TRANSFORMER AS SHOWN ON THE DRAWING.
- CONTRACTOR SHALL COORDINATE WITH PRVEPA ON ACCESS TO THE TRANSFORMER AND TO DE-ENERGIZE THE TRANSFORMER WHILE THE CONDUIT IS BEING INSTALLED.
- CONTRACTOR SHALL PLAN AND CONDUCT THIS TASK SUCH THAT THE DOWN TIME ON THE EXISTING PUMP STATION IS MINIMIZED.
- PRVEPA SHALL INSTALL THE SERVICE CONDUCTORS AND MAKE CONNECTIONS TO THE TRANSFORMER AND TO THE METER SOCKET. THIS TASK SHALL BE DONE PRIOR TO THE NEW PUMP STATION BEING READY TO ENERGIZE. SEE "ELECTRICAL NOTES - GENERAL".
- CONTRACTOR SHALL INSTALL CONDUIT AT A MINIMUM DEPTH OF 36" BELOW FINAL GRADE.

NO.	DATE	DESCRIPTION	BY
GENERATOR PAD, SERVICE CONDUIT.			
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI			
 Engineering Progress 301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by: JS	Checked by: JS	Scale: AS SHOWN	
Date: 12/16/2019	Working No. E-4		
Drawing No.: 1273-S015	Sheet No. 30		

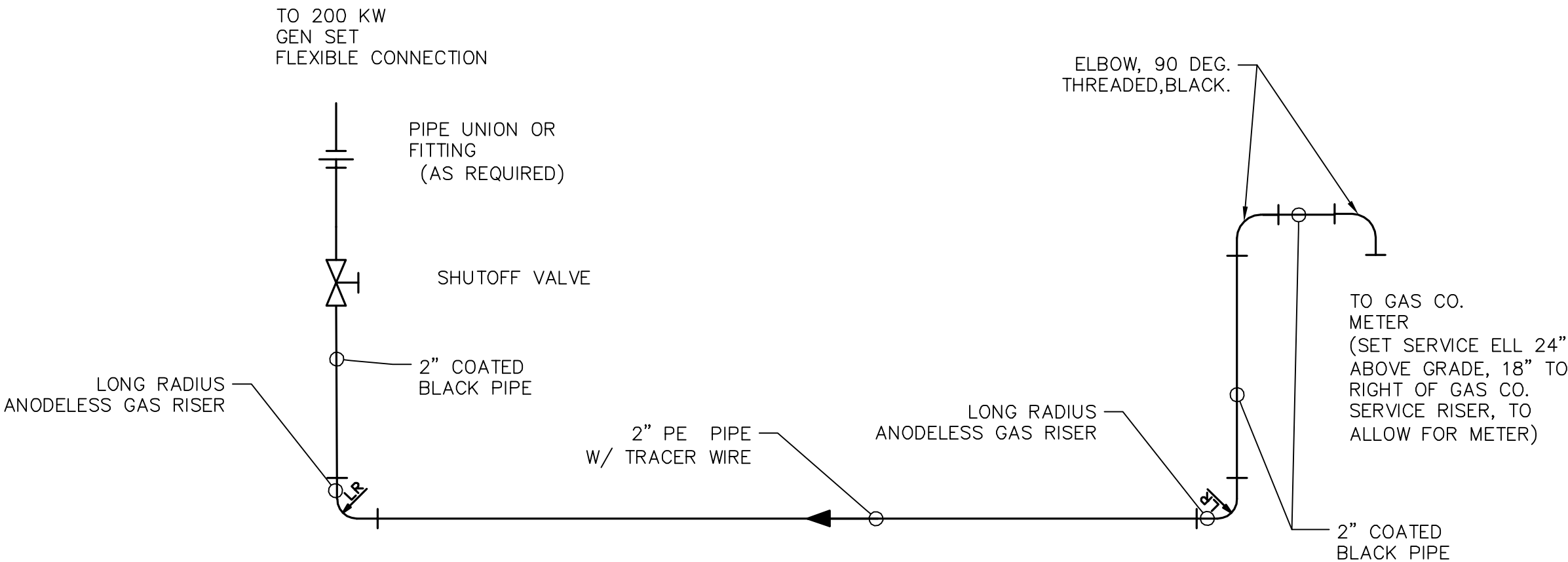


NO.	DATE	DESCRIPTION	BY
ELECTRICAL—SINGLE LINE DIAGRAM			
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI			
 Engineering Progress 301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by: JS		Checked by: JS	Scale: NONE
Date: 12/16/2019		Working No. E-5	
Drawing No.: 1273-S015		Sheet No. 31	

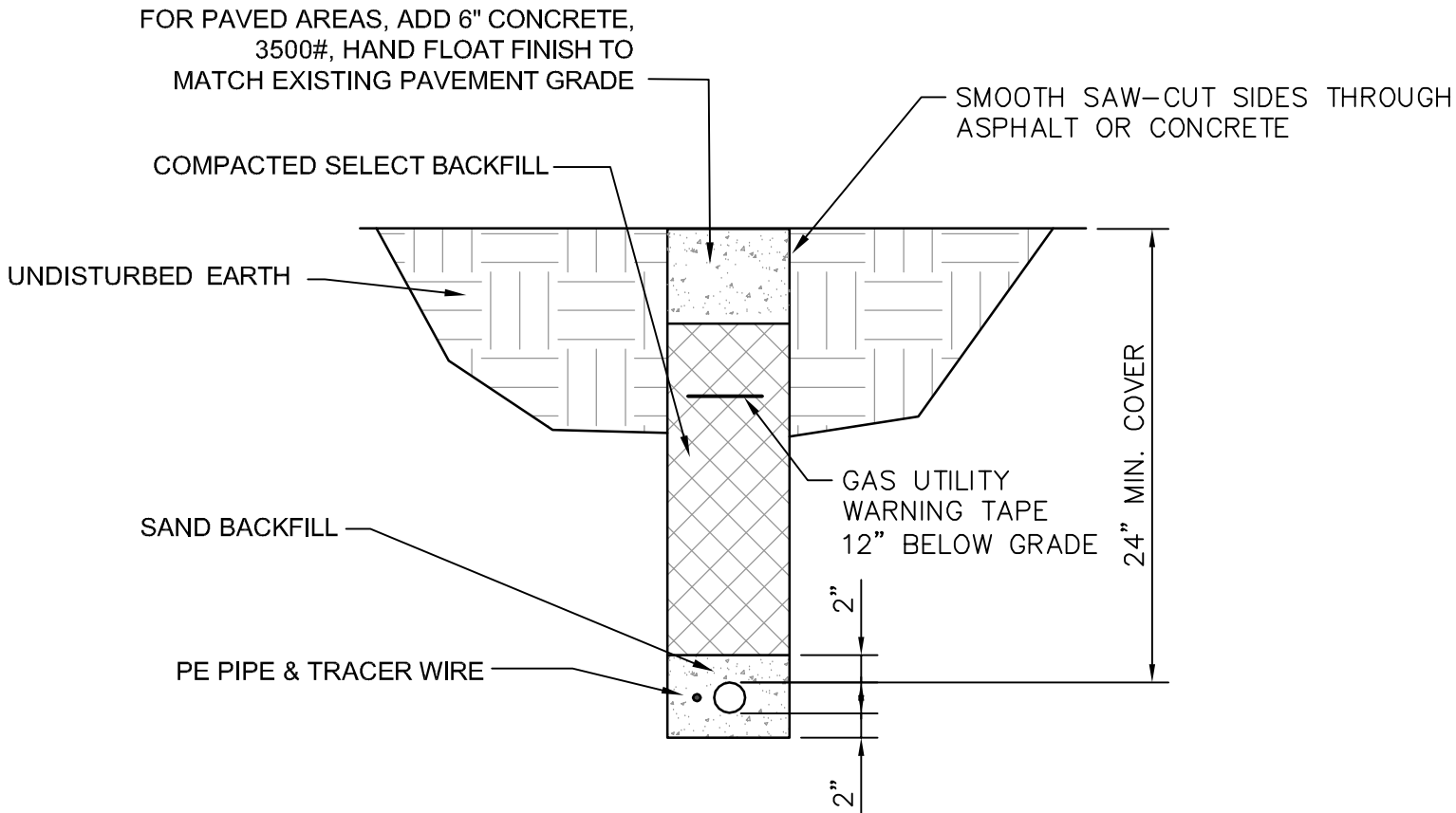
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NATURAL GAS LINE NOTES:

1. CONTRACTOR SHALL INSTALL A NATURAL GAS LINE FROM THE GAS METER LOCATION TO THE GENERATOR CONNECTION POINT.
2. CONTRACTOR SHALL COORDINATE WITH SPIRE ENERGY GAS CO FOR CONNECTION TO METER AND REGULATOR BY THE GAS COMPANY.
3. THE GAS METER TO BE LOCATED NEAR THE CONTROL BUILDING AS SHOWN ON DRAWINGS.
4. THE GAS LINE ABOVE GRADE SHALL BE 2" COATED BLACK PIPE. THE GAS LINE BELOW GRADE SHALL BE YELLOW 2" POLYETHYLENE GAS PIPING WITH A TRACER WIRE AT SAME GRADE AS THE PIPE. DEPTHS SHALL BE 24 INCHES AS SHOWN ON TRENCHING DRAWING DETAIL.
5. RISERS AND OTHER FITTINGS SHALL BE AS SHOWN ON THE GAS TRAIN DETAIL DRAWING AND ACCORDING THE THE SPECIFICATIONS.



GAS TRAIN - PUMP STATION TO 200 KW GENERATOR
NOT TO SCALE

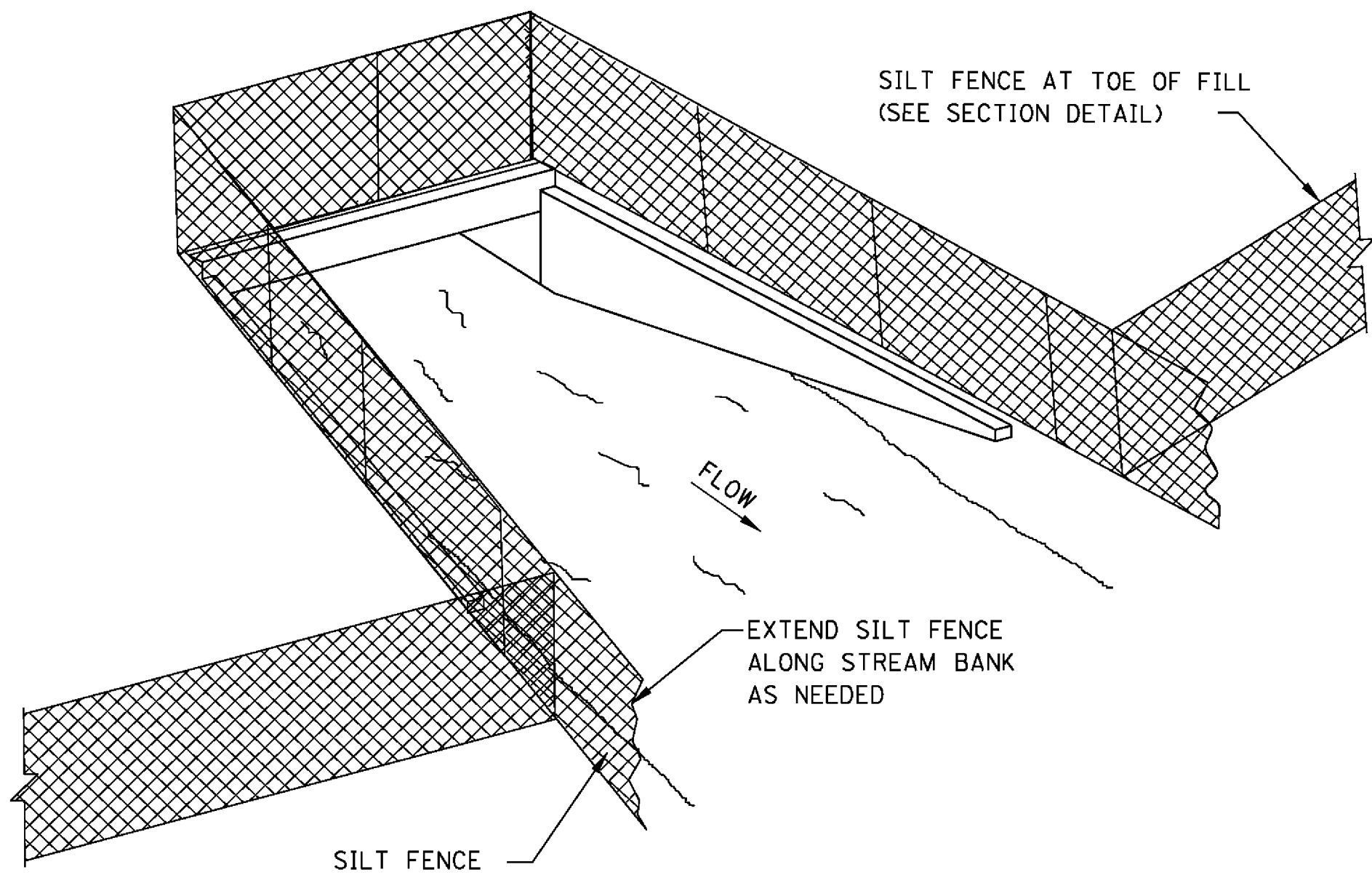


DETAIL : GAS LINE TRENCHING DETAIL
NOT TO SCALE

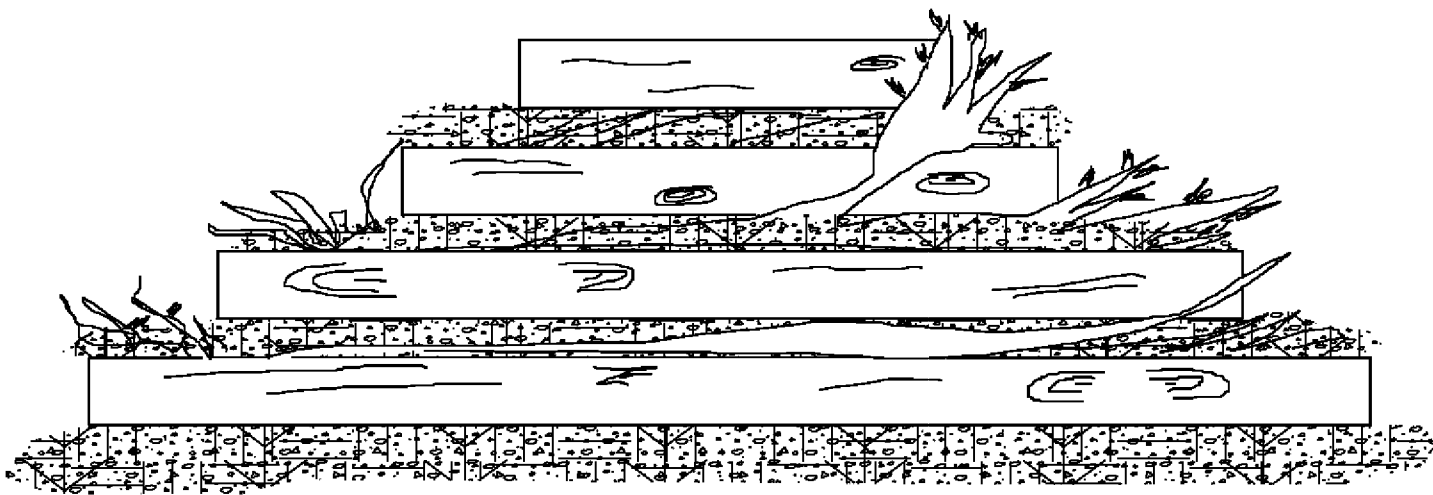
TRENCHING NOTES:

1. PROVIDE MINIMUM 24" COVER OVER NATURAL GAS PIPE . DEPTHS SPECIFIED ARE TO FINISHED GRADE. OVER-EXCAVATE TRENCHES AS NECESSARY TO ALLOW FOR SAND BEDDING OR LOOSE AND SANDY SOILS.
2. PROVIDE SELECT BACKFILL OF CLEAN SAND FREE OF ROCKS AND SHARP OBJECTS.
3. PROVIDE MINIMUM 2" SAND UNDER PIPE.
4. BACKFILL IN 6" LIFTS, TAMPING EACH LIFT.
5. NATURAL GAS PIPE IS TYPICALLY YELLOW POLYETHYLENE (PE) GAS PIPE. INSTALL PIPE WITH MIN. #14 AWG COPPER, YELLOW INSULATION, TRACER WIRE. DEPTH REQUIREMENT IS 24" MINIMUM. METHOD AND MATERIALS USED SHALL BE APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
6. PROVIDE GAS UTILITY MARKING TAPE 12" BELOW GRADE AND #14 AWG COPPER YELLOW TRACER WIRE AT GAS PIPE GRADE.

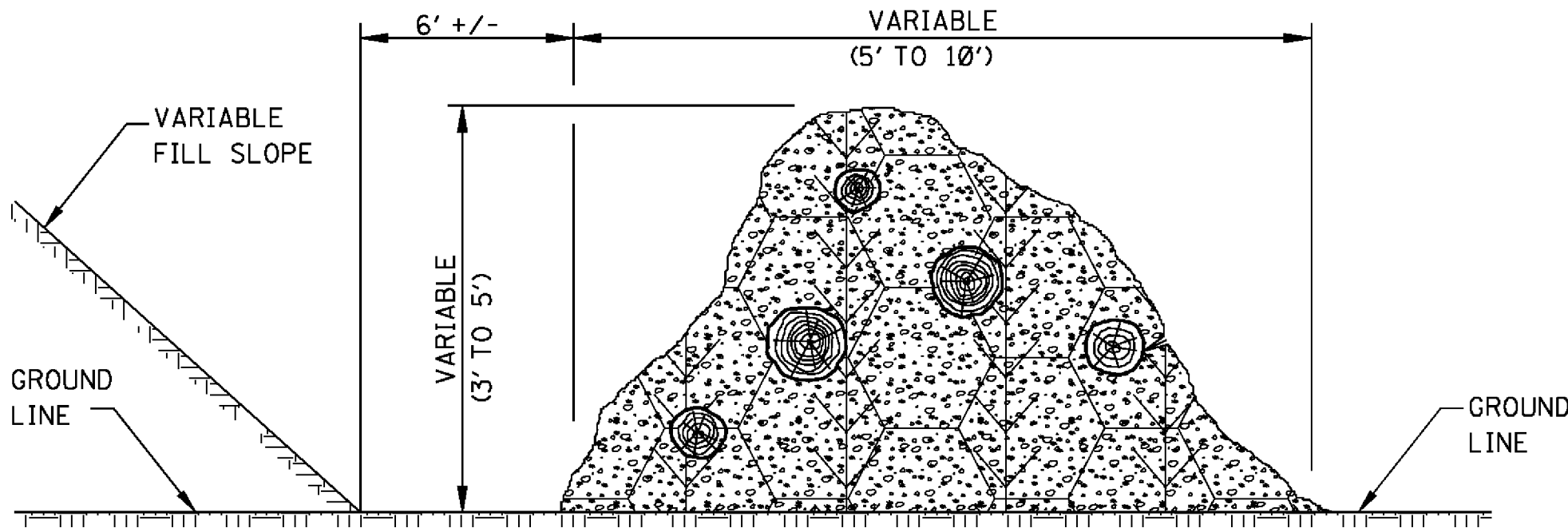
NO.	DATE	DESCRIPTION	BY
GAS — GAS TRAIN, TRENCHING			
CROSS CREEK PARKWAY PUMP STATION REHAB CITY OF HATTIESBURG LAMAR COUNTY, MISSISSIPPI			
sdw Engineering Progress 301 Second Ave. Hattiesburg, MS 39401 (p) 601.544.1821 (f) 601.544.0501 sd-w.com			
Drawn by:	JS	Checked by:	JS
Date:	12/16/2019	Working No.	E-6
Drawing No.:	1273-S015	Sheet No.	32



SEDIMENT BARRIER AT CROSS DRAIN



FRONT ELEVATION

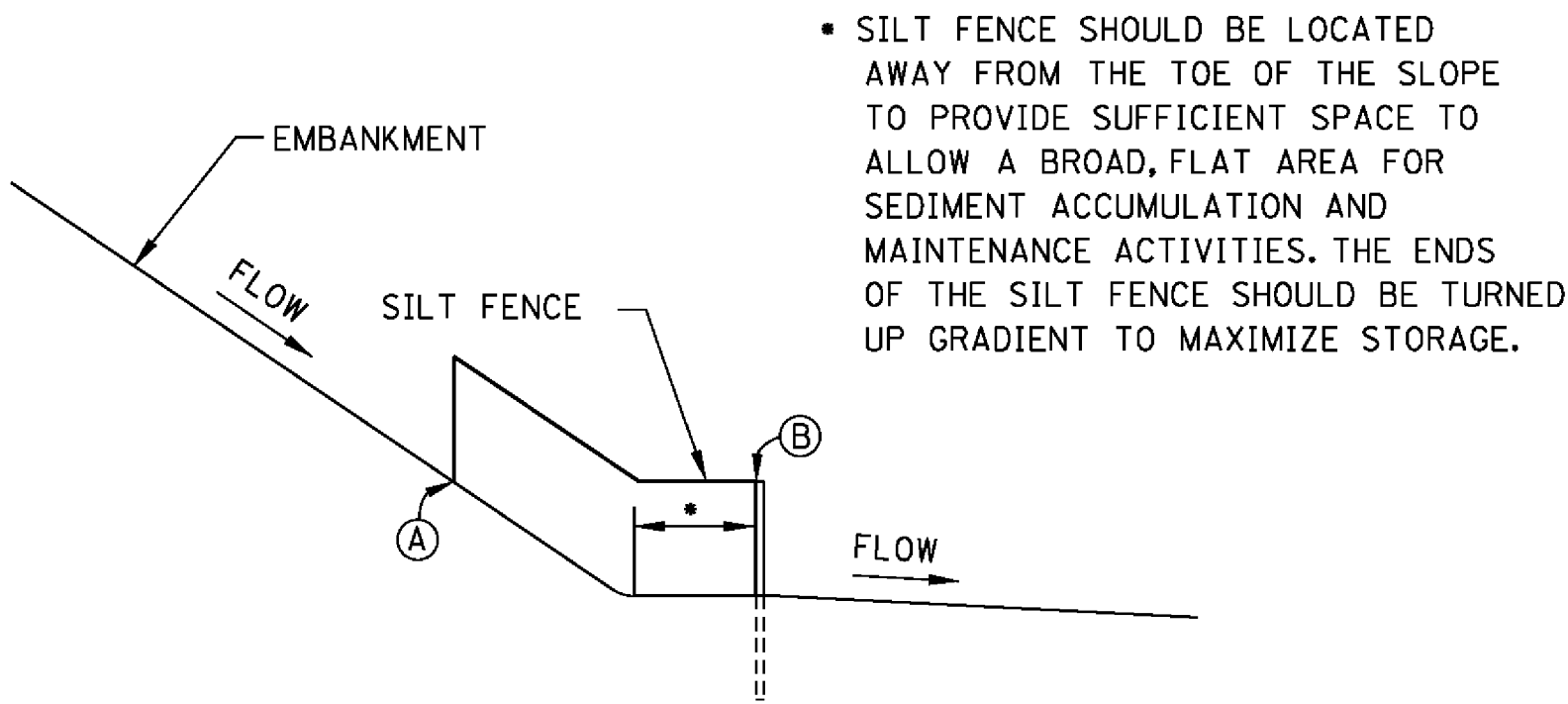


SIDE ELEVATION

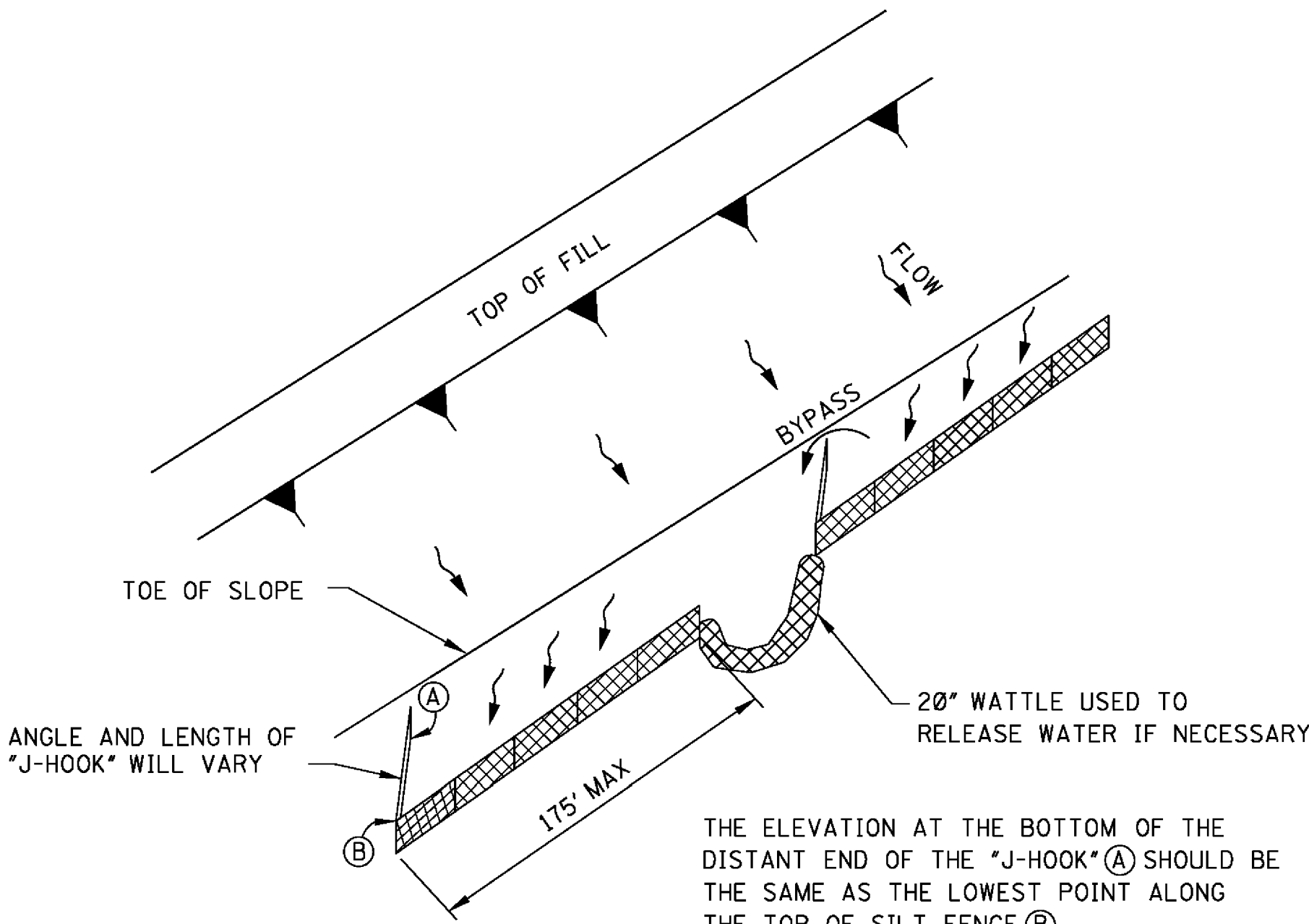
TEMPORARY BRUSH BARRIER

- NOTES:
- BRUSH BARRIER MAY BE USED WHERE NATURAL GROUND IS LEVEL OR SLOPING AWAY FROM PROJECT.
 - PLACE BRUSH, LOG AND TREE LAPS APPROXIMATELY PARALLEL TO TOE OF FILL SLOPE WITH SOME OF THE HEAVIER MATERIALS BEING PLACED ON TO TO PROPERLY SECURE THE BARRIER AS DETAILED AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED OR PERMITTED BY THE ENGINEER.
 - TO ALLOW WATER TO SEEP THROUGH BRUSH BARRIER, INTERMINGLE THE BRUSH, LOG AND TREE LAPS SO AS NOT TO FORM A SOLID DAM.
 - THE BRUSH BARRIER MAY BE CHOKED WITH FILTER FABRIC. THE COST OF FABRIC TO BE INCLUDED IN OTHER ITEMS BID.
 - TEMPORARY BRUSH BARRIER WILL NOT BE MEASURED FOR SEPARATE PAYMENT.

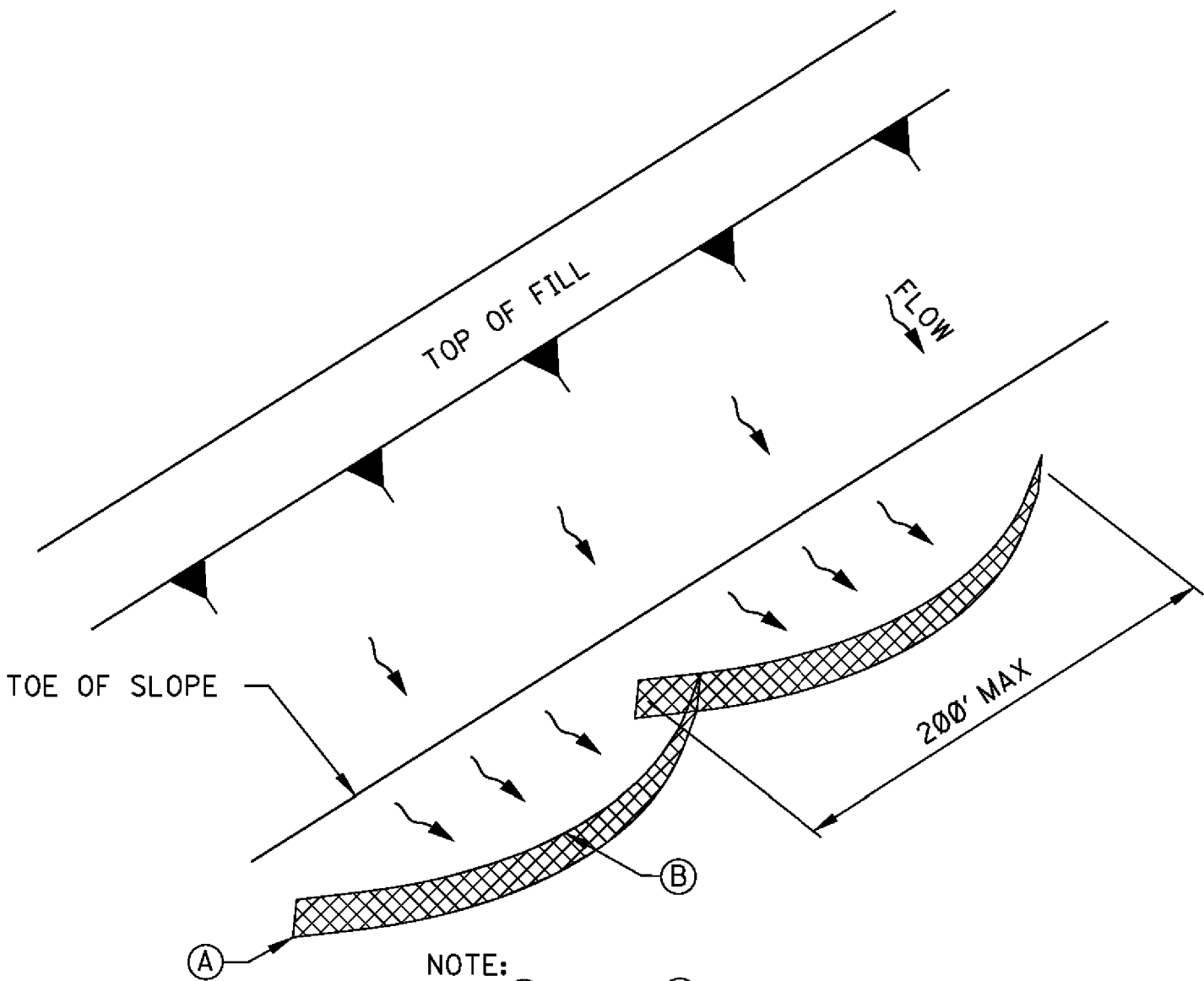
NOTE: ANCHOR AND INSTALL SILT FENCE PER DETAILS SHOWN ON WK. NO. ECD-3



SILT FENCE SECTION AT TOE OF FILL



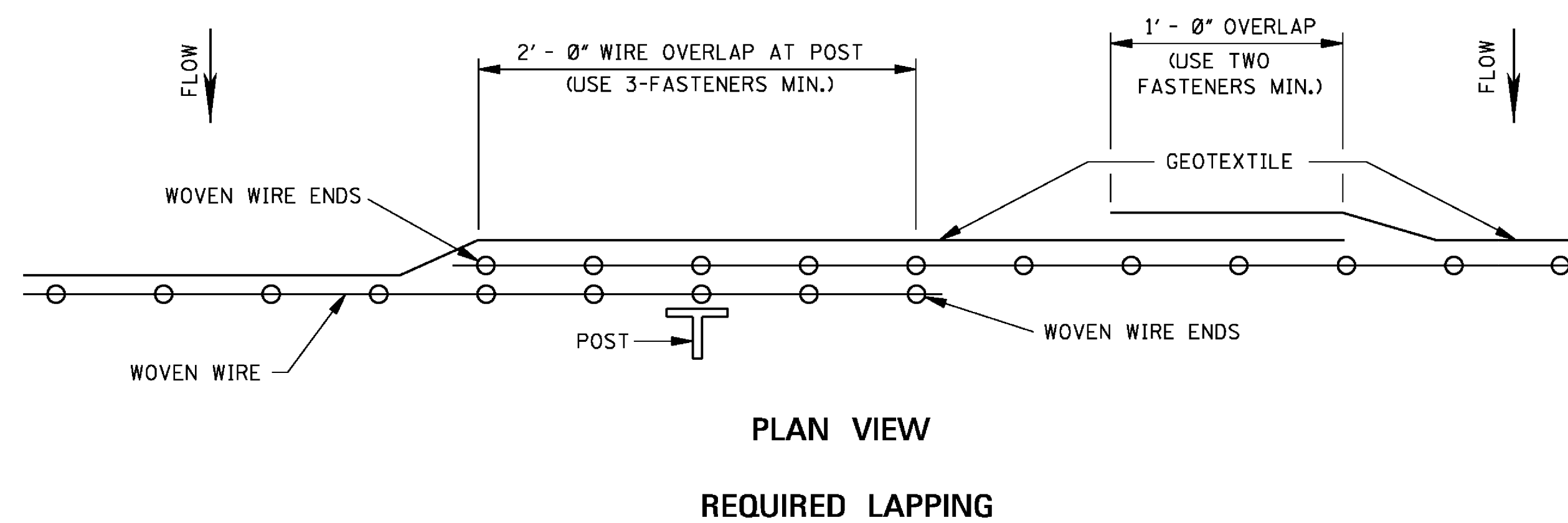
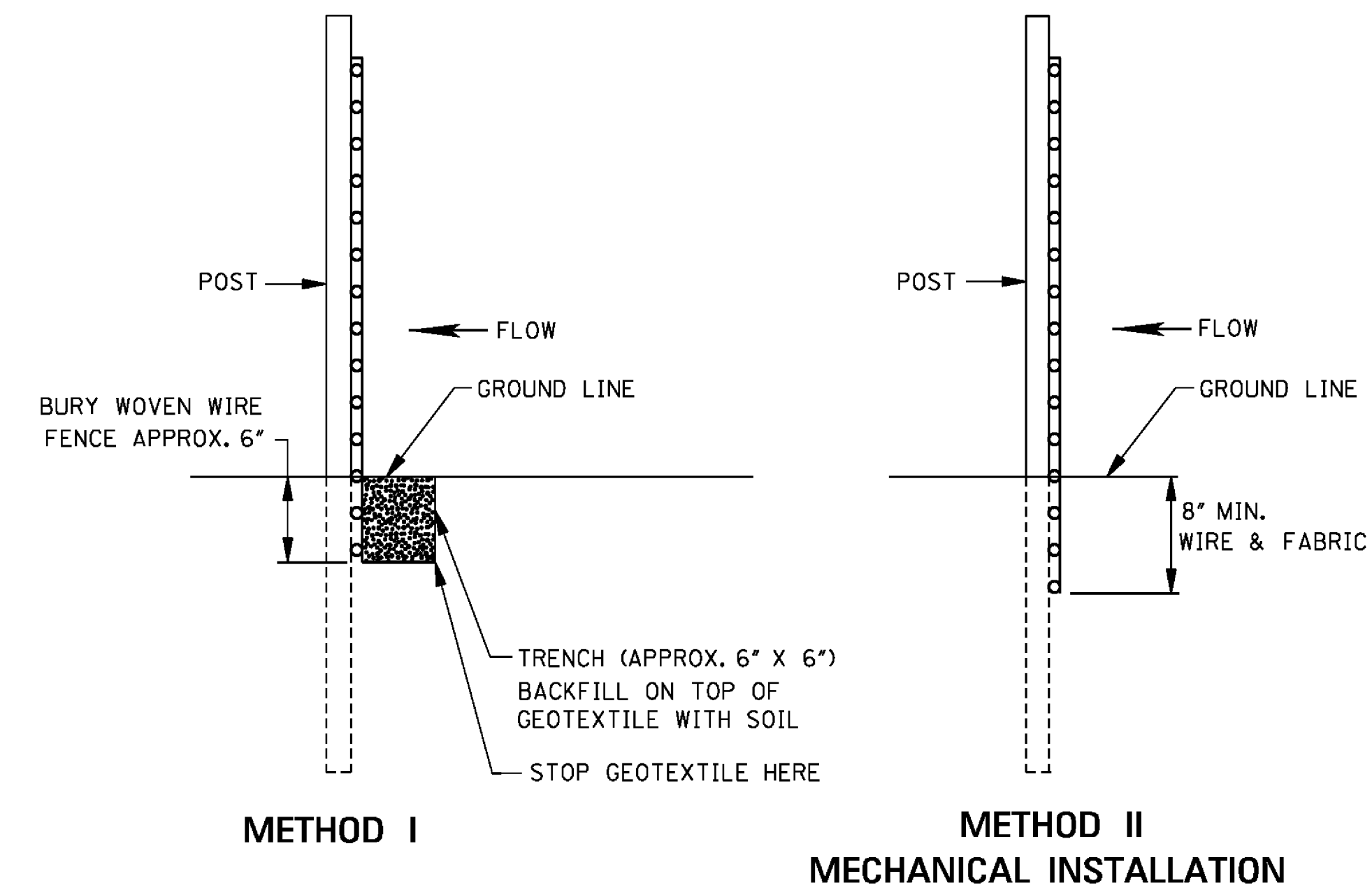
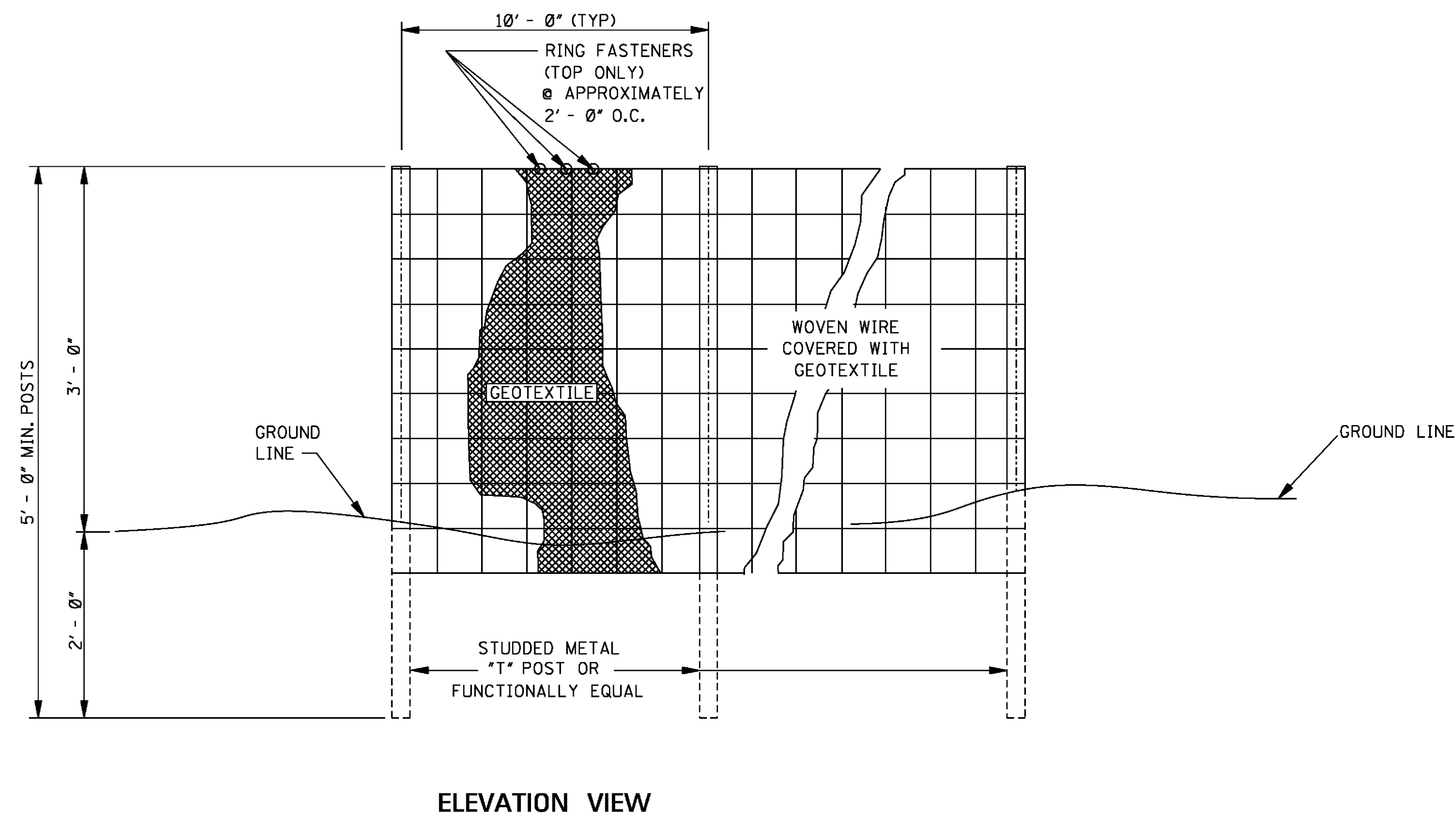
"J-HOOK" SILT FENCE APPLICATION



"SMILE-CONFIGURATION" SILT FENCE APPLICATION

				MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN			
				DETAILS OF SEDIMENT BARRIER APPLICATIONS			
							
				WORKING NUMBER ECD-2			
				SHEET NUMBER 6102			
				ISSUE DATE: AUGUST 01, 2017			

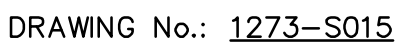
STATE	PROJECT NO.
MISS.	

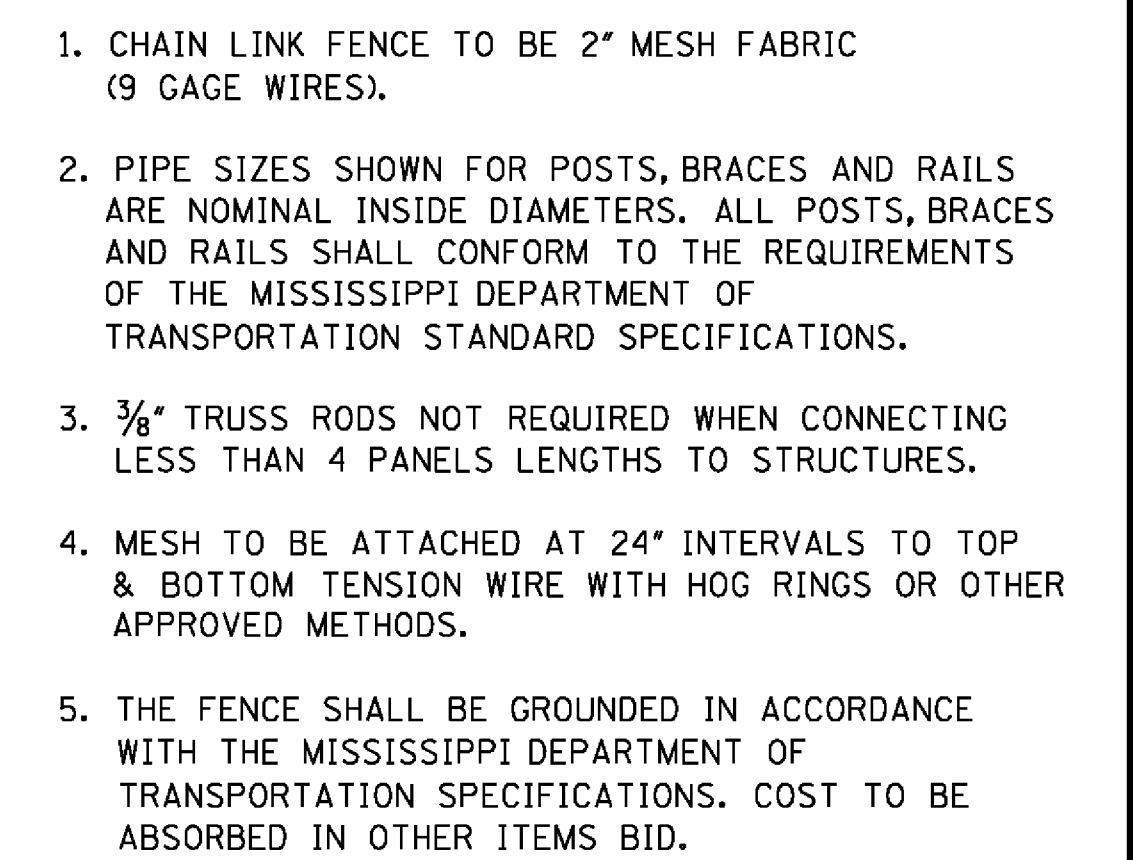


- GENERAL NOTES:

1. SILT FENCES SHOULD BE USED IN AREAS WHERE FLOW IS NOT SEVERE.
2. SILT FENCES ARE TEMPORARY SEDIMENT CONTROL ITEMS THAT SHOULD BE ERECTED OPPOSITE ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STEAMS AND CHANNELS.
3. SILT FENCE SHOULD BE PLACED WELL INSIDE RIGHT-OF-WAY AND ALONG EDGE OF CLEARING LIMITS. THIS WILL ALLOW ROOM FOR BACK-UP FENCE IF FIRST FENCE BECOMES FULL.
4. WHENEVER POSSIBLE SILT FENCE SHOULD BE CONSTRUCTED ACROSS A LEVEL AREA IN THE SHAPE OF A SMILE. THIS AIDS IN PONDING OF RUNOFF AND FACILITATES SEDIMENTATION.
5. THE CONTRACTOR MAY ELECT TO USE EITHER METHOD I OR METHOD II. COST TO BE LINEAR FEET OF SILT FENCE.
6. METHOD II INSTALLATION SHALL BE ACCOMPLISHED USING AN IMPLEMENT THAT IS MANUFACTURED FOR THE APPLICATION AND PROVIDES A CONFIGURATION MEETING THE REQUIREMENTS OF DETAIL.
7. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
8. GEOTEXTILE FABRIC MEETING THE TYPE II MATERIAL REQUIREMENTS AND INSTALLED ACCORDING TO SPECIFICATION MAY BE USED WITHOUT WIRE FENCE.

			BY	MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN
			REVISION	
				<i>DETAILS OF SILT FENCE INSTALLATION</i>
			DATE	 WORKING NUMBER ECD-3 SHEET NUMBER 6103
				ISSUE DATE: <u>AUGUST 01, 2017</u>

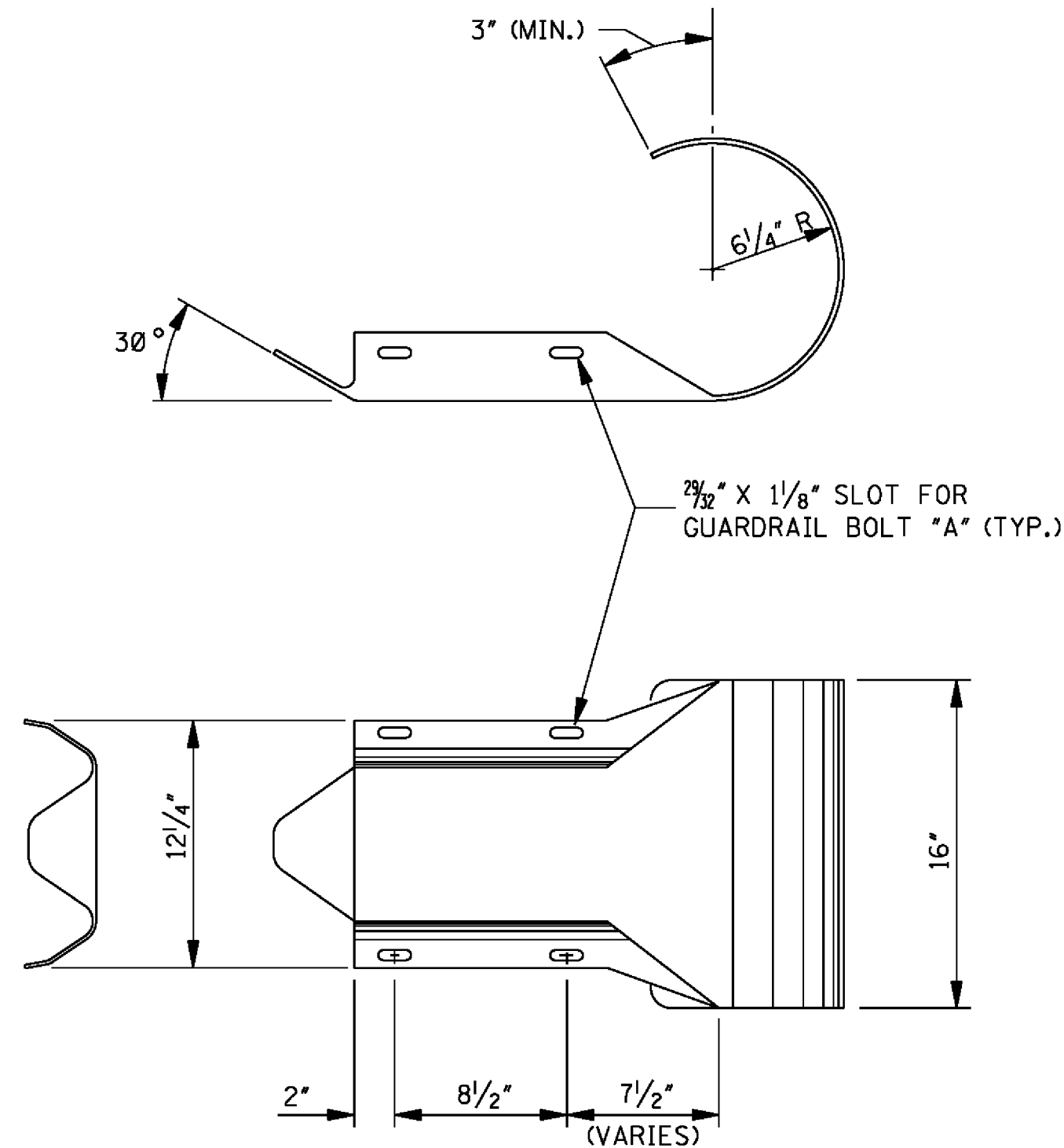
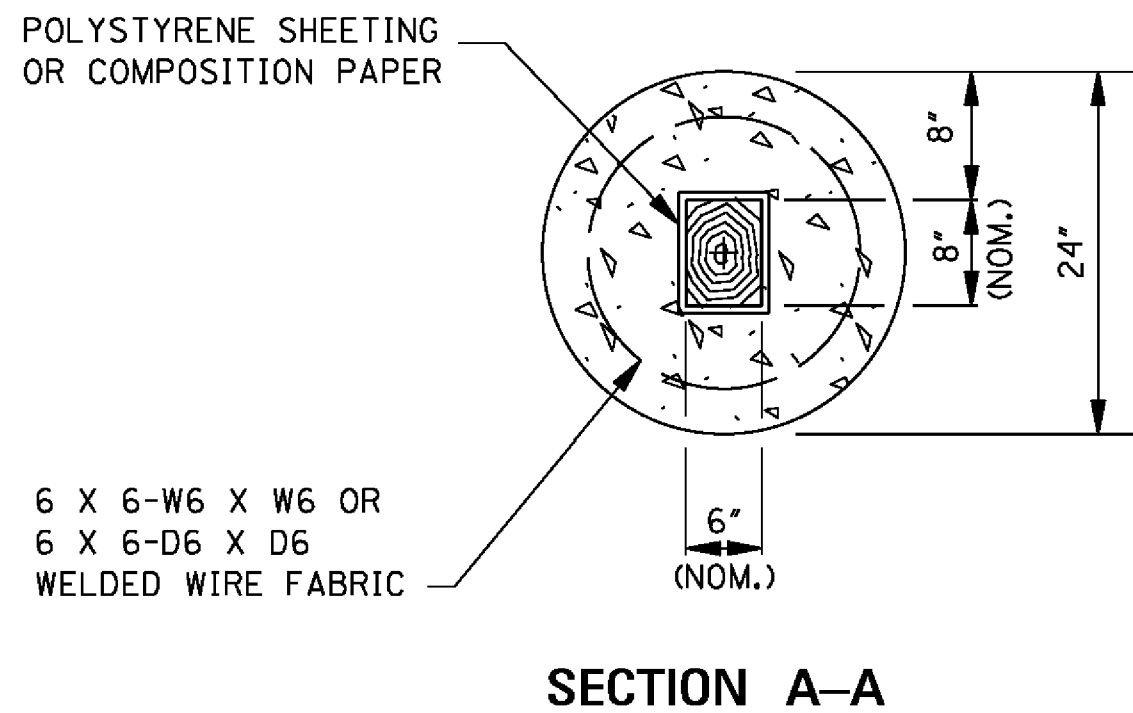
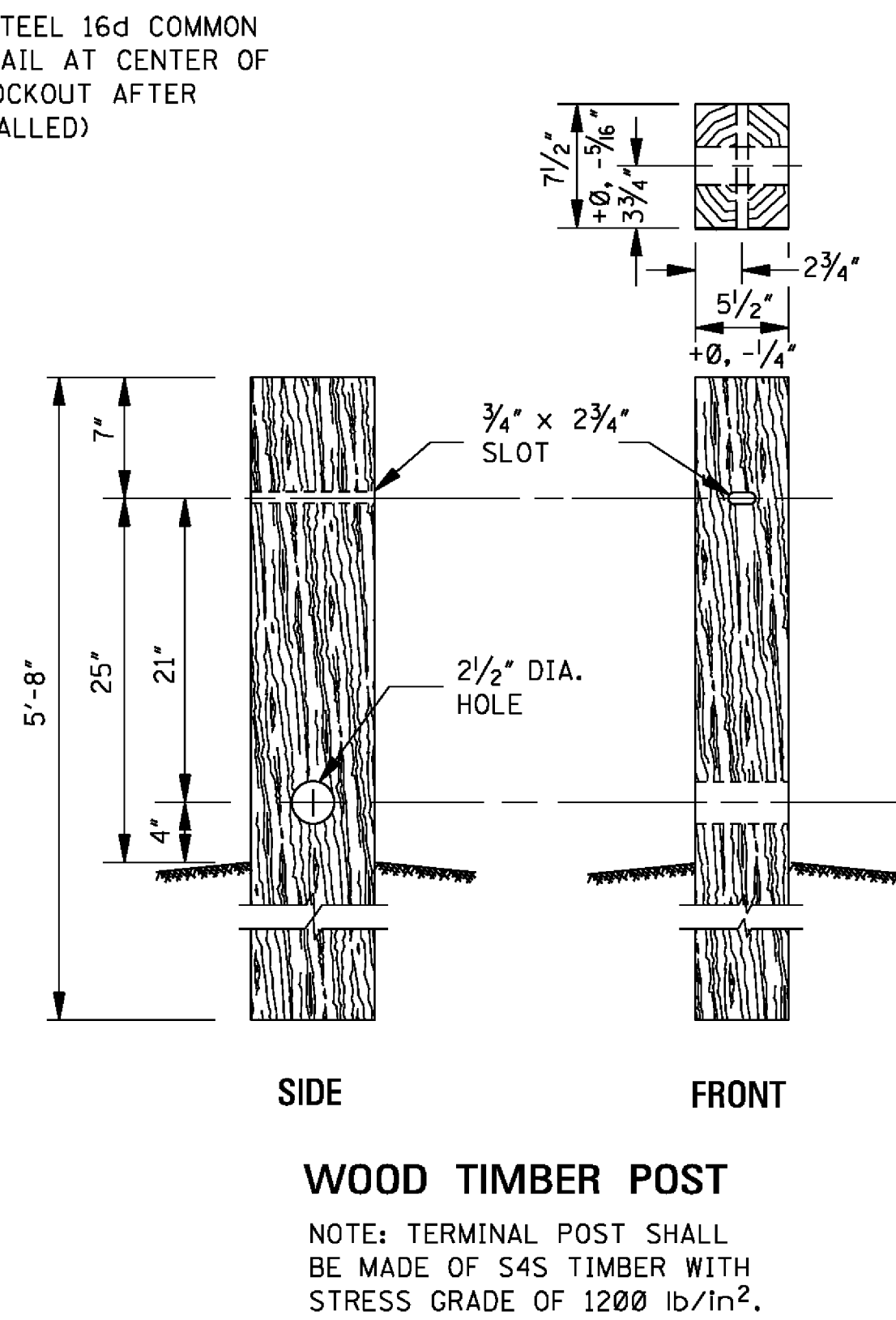
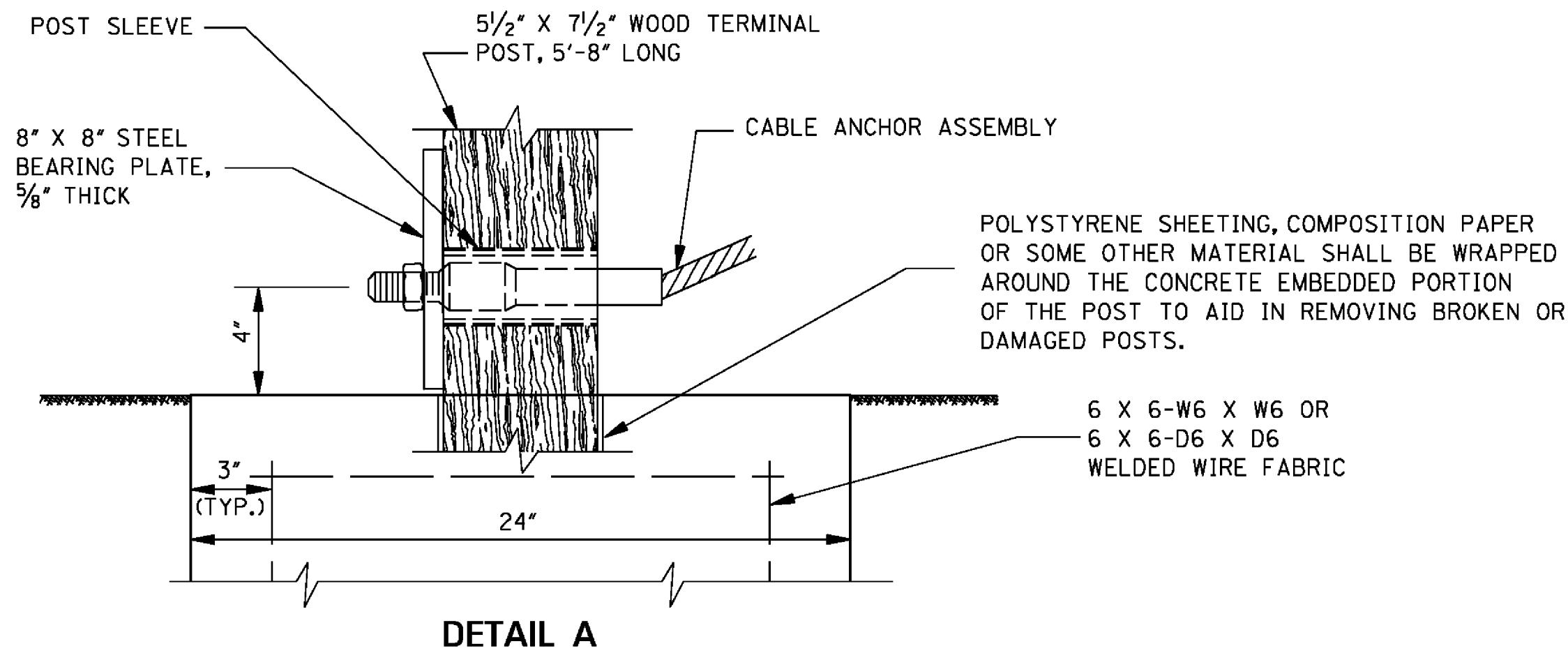
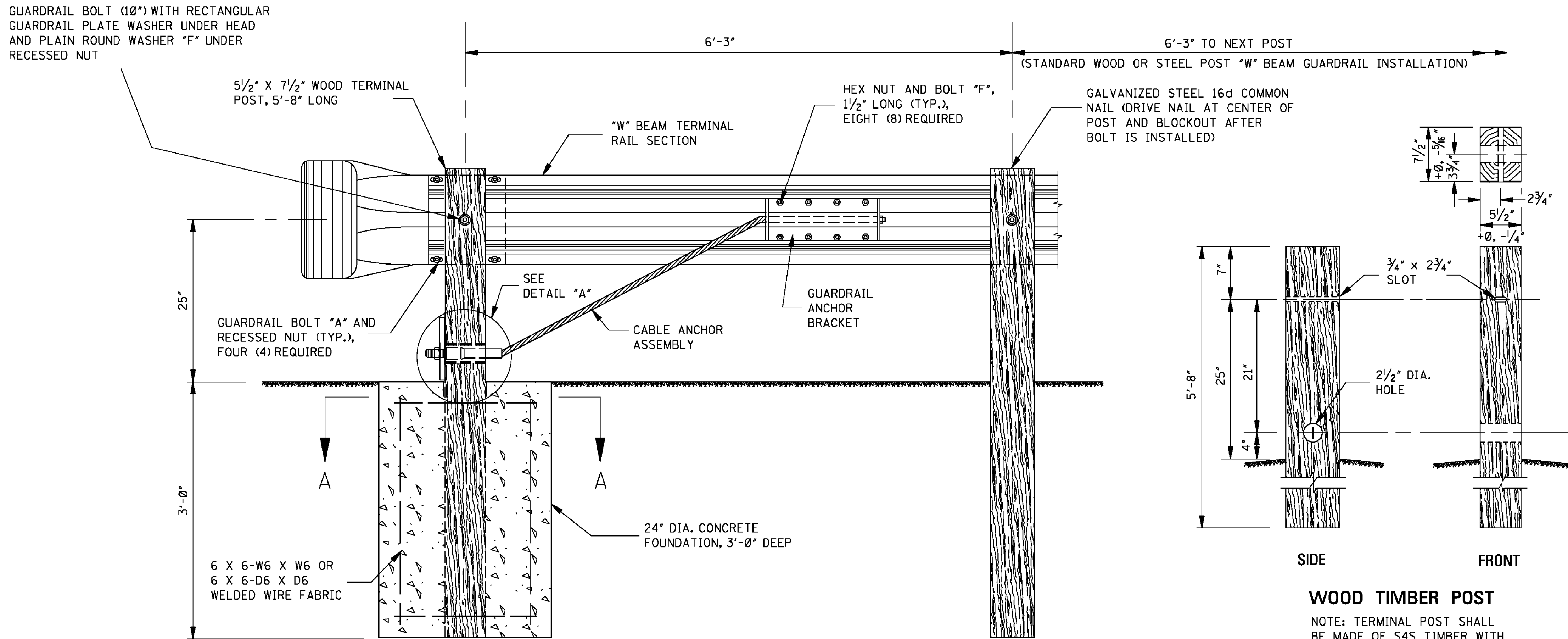
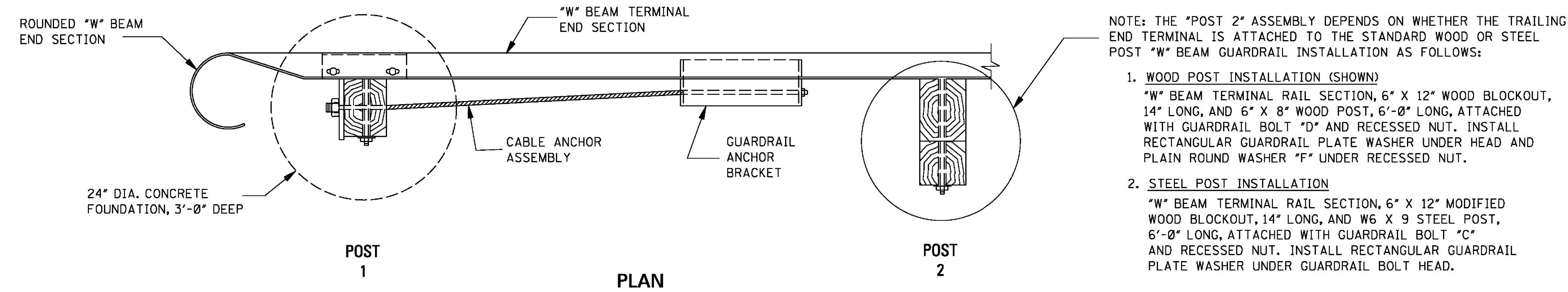




The drawing illustrates the construction of the top guard. The **SIDE VIEW** on the left shows a vertical profile with a **BARB WIRE** running along the top edge and a **FABRIC** patch covering a hole. The **FRONT VIEW** on the right shows the guard's face, featuring a grid of horizontal and vertical wires with barbs, and a diamond-patterned fabric patch at the bottom right corner.

DRAWING No.: 1273-S015

STATE	PROJECT NO.
MISS.	



ROUNDED "W" BEAM END SECTION
 NOTE: THE CROSS-SECTIONAL DIMENSIONS FOR THIS PART ARE TO FIT OVER THE STANDARD "W" BEAM SECTION.

- GENERAL NOTES:
- THIS ANCHORAGE MAY ONLY BE USED ON THE TRAILING END OF A BARRIER WHICH IS NOT EXPOSED TO VEHICULAR IMPACT.
 - GUARDRAIL SHALL MEET THE REQUIREMENTS OF AASHTO M 180, CLASS A, TYPE 1 UNLESS OTHERWISE DESIGNATED.
 - ALL WOOD POSTS AND BLOCKOUTS SHALL BE TREATED TIMBER IN ACCORDANCE WITH MISSISSIPPI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
 - CONCRETE FOR THE CONCRETE FOUNDATION MAY BE EITHER CLASS "B" STRUCTURAL CONCRETE OR AN APPROVED COMMERCIAL PRE-MIXED BAG CONCRETE. THE WELDED WIRE FABRIC FOR THE CONCRETE FOUNDATION SHALL CONFORM TO AASHTO M 221/M 221M AND AASHTO M 55M/M 55.
 - FOR DETAILS OF HARDWARE AND COMPONENTS NOT FOUND ON THIS SHEET, SEE SHEET GR-HW.
 - DETAILS PERTINENT TO THE STANDARD INSTALLATION OF "W" BEAM SECTIONS WILL BE FOUND ON SHEET GR-1, FOR WOOD POSTS, AND GR-1B, FOR STEEL POSTS.
 - FOR OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS AND RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FOR NO. 13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE," LATEST EDITION.

				BY	MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN
				REVISION	GUARDRAIL: TYPE 1 CABLE ANCHORAGE (CONCRETE FOOTING)
				DATE	ISSUE DATE: _____ AUGUST 01, 2017 _____

	
	WORKING NUMBER GR-3A
	SHEET NUMBER 6213



NOTE: TERMINAL POST SHALL
BE MADE OF S4S TIMBER WITH 2
STRESS GRADE OF 1200 lbs/in.



NOTE: 2 REQUIRED



NOTE: TERMINAL POST SHALL BE ABLE TO SLIDE INTO THE TOP OF THIS SECTION SO THE ACTUAL INSIDE DIMENSIONS OF THIS GALVANIZED TUBE CANNOT BE LESS THAN 7 1/2" X 5 1/2".



NOTES:

1. THE "W" BEAM TERMINAL CONNECTOR SHALL BE AASHTO M 180 CORRUGATED SHEET STEEL, CLASS B, TYPE 1.
2. SPLICE-BOLT SLOTS MAY ALSO BE ORIENTED AT 50° (ON THE FLAT) INSTEAD OF 0° AS SHOWN.



BOLT	L	T (MIN.)
"A"	1 $\frac{1}{4}$ "	1"
"B"	12"	4"
"C"	14"	4"
"D"	22"	4"
"E"	24"	4"
"F"	33"	4"
	2"	1 $\frac{3}{4}$ "
	10"	4"
	25"	4"

NOTES:

1. ALL GUARDRAIL BOLTS ARE $\frac{5}{8}$ " - 11 UNC
THREAD PITCH.
2. IF ANY BOLT EXTENDS MORE
THAN $\frac{1}{4}$ " FROM THE NUT, THE BOLT
SHOULD BE TRIMMED BACK.

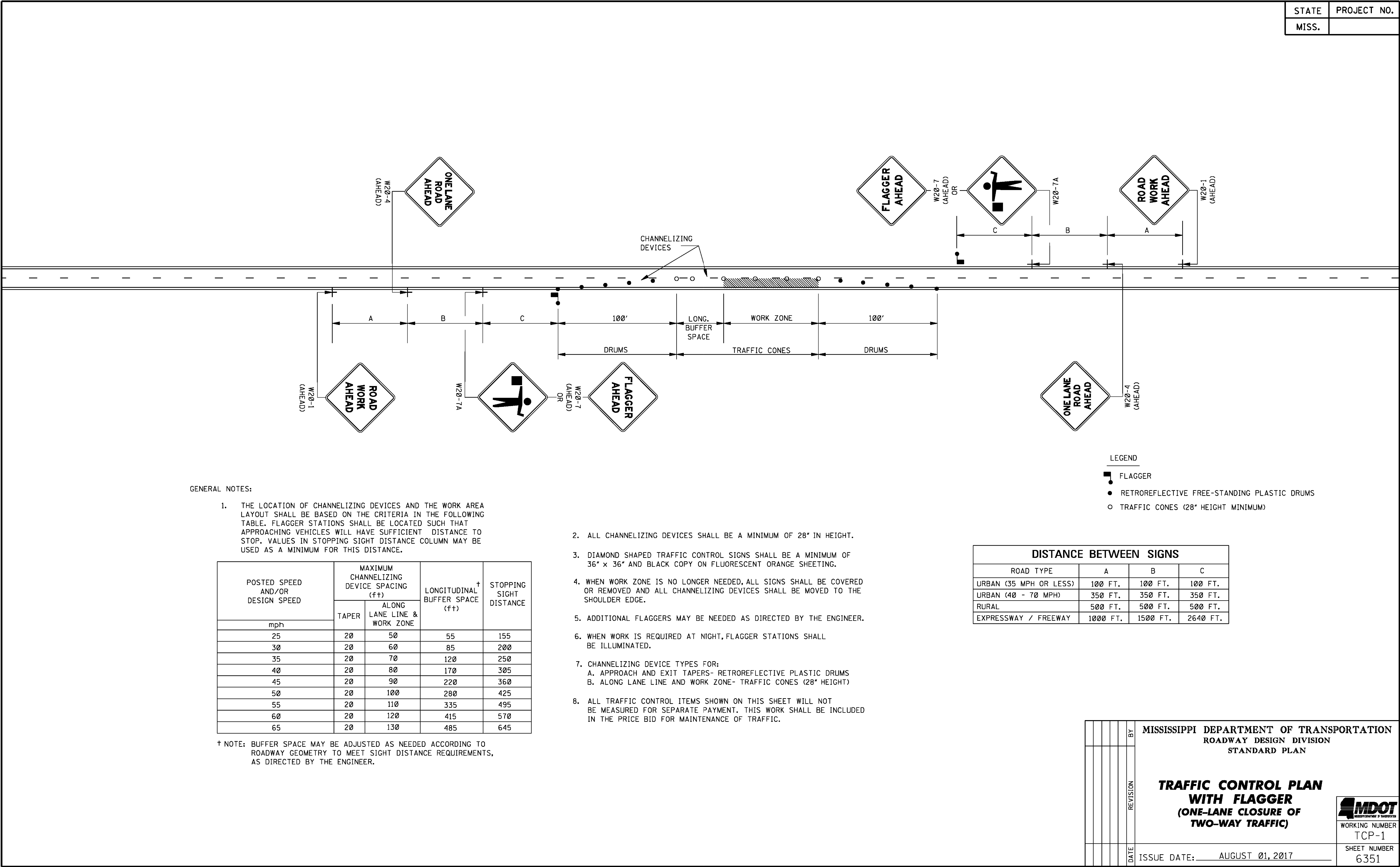
FASTENER DETAILS

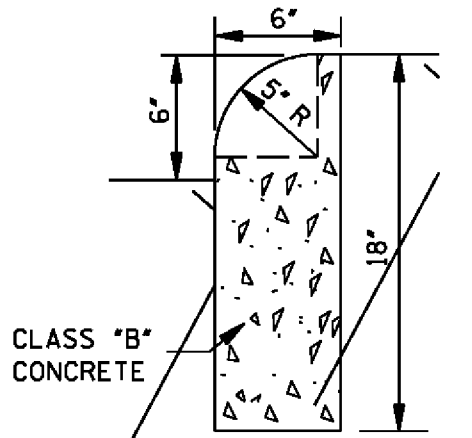


HEX NUT "H"

DRAWING No.: 1273-S015

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The diagram illustrates the plan view of a concrete driveway. It features a central 'PAY AREA DRIVEWAY' flanked by 'CURB & GUTTER' sections. A 'NORMAL FLOW LINE' is indicated by a dashed line. Expansion joints are shown as '1/2" EXPANSION JOINT OR 1/2" DEEP SCORING AS REQUIRED BY SPACING'. A 'POURED SEAL (ABSORBED)' is located at the joint. The driveway is divided into sections by '1/4" JOINT'. The 'VAR. RADIUS (TAB. "A")' is shown on both sides of the driveway. The 'B' dimension is indicated as 'B' and 'B'.

TYPE "I" DRIVEWAY
PLAN OF CONCRETE DRIVEWAY

PLAN OF CONCRETE DRIVEWAY ACROSS SIDEWALK AREA



SECTION A-A

4' EXTRA DEPTH SHALL BE PLACED FULL WIDTH OF SIDEWALK, WHERE DRAIN PIPE PASSES THROUGH SIDEWALK. PAYMENT SHALL BE INCLUDED IN COMPENSATION FOR PIPE.

4" PVC DRAIN PIPE

2'-0"

SECTION B-B

R.O.W

VARIABLE $\geq 20'$ DESIRABLE; 15' MINIMUM

10% OR FLATTER

5' MINIMUM

6"

1'-8"

TOP OF CURB

MAX. SLOPE 9%

POURED SEAL (ABSORBED)

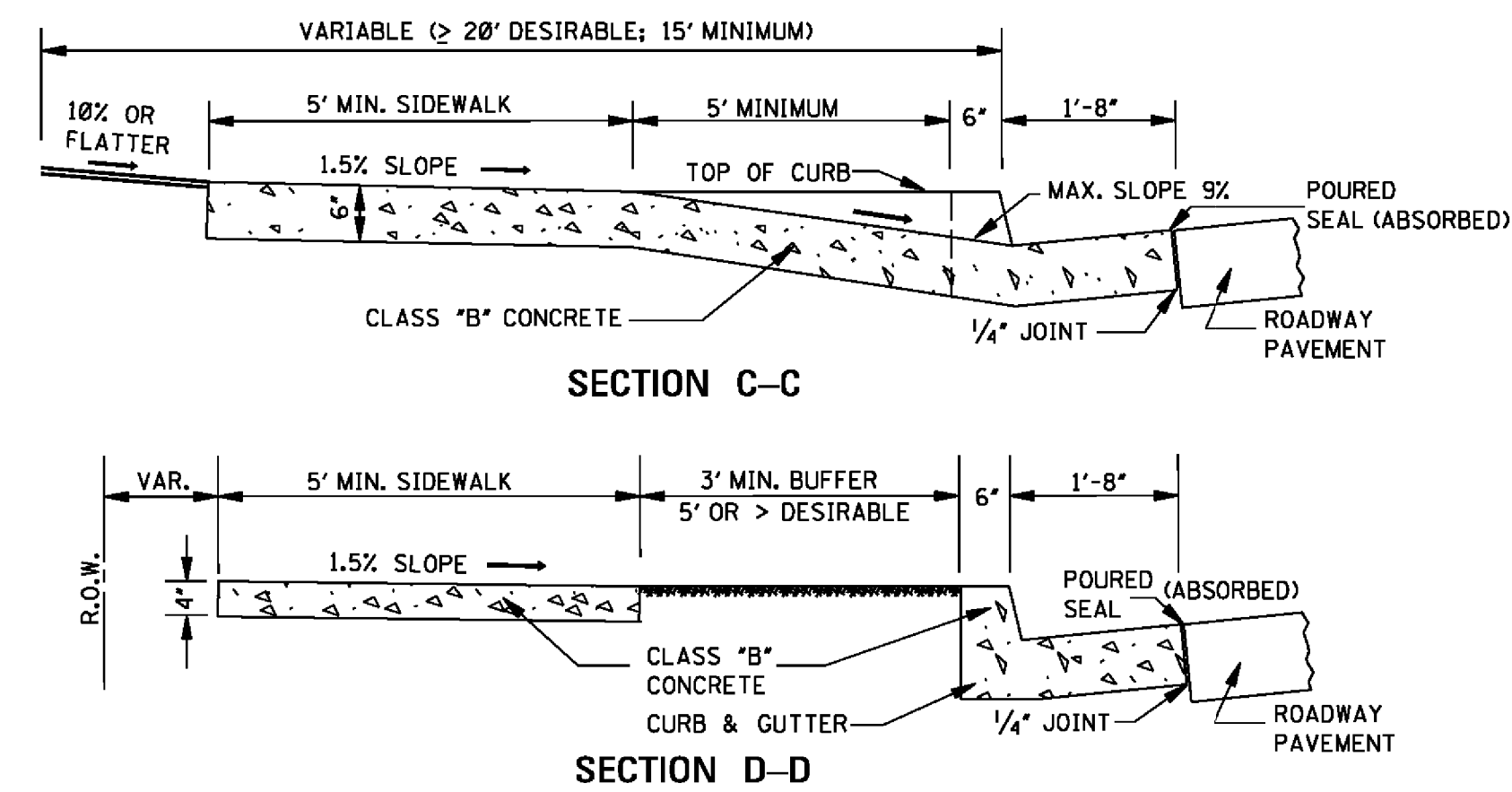
CLASS "B" CONCRETE

1/4" JOINT

ROADWAY PAVEMENT

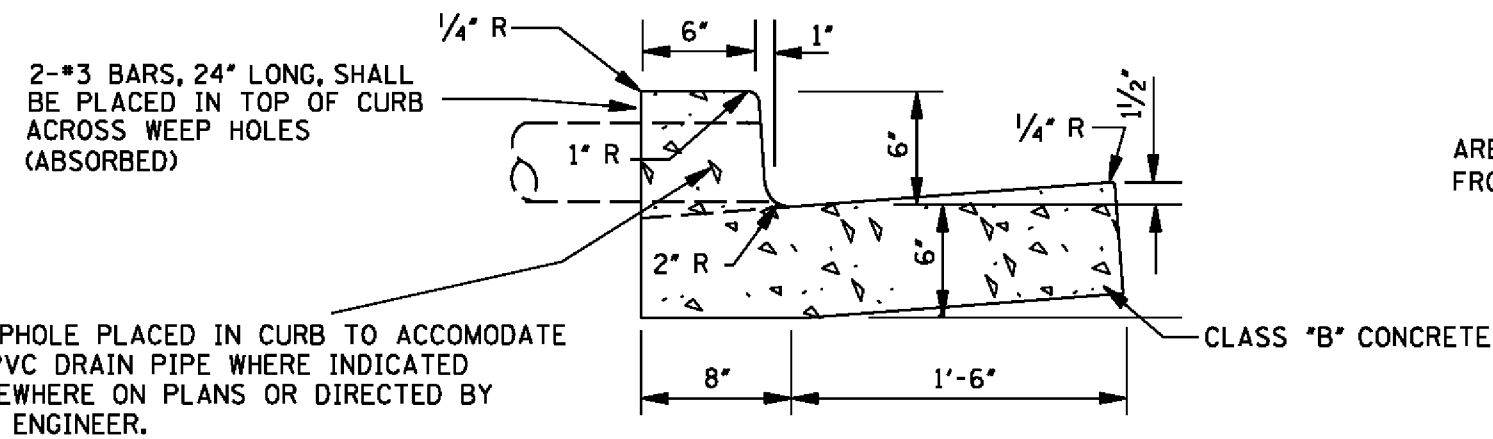
WEEP
4" PV
ELSEV
THE

SECTION B-B

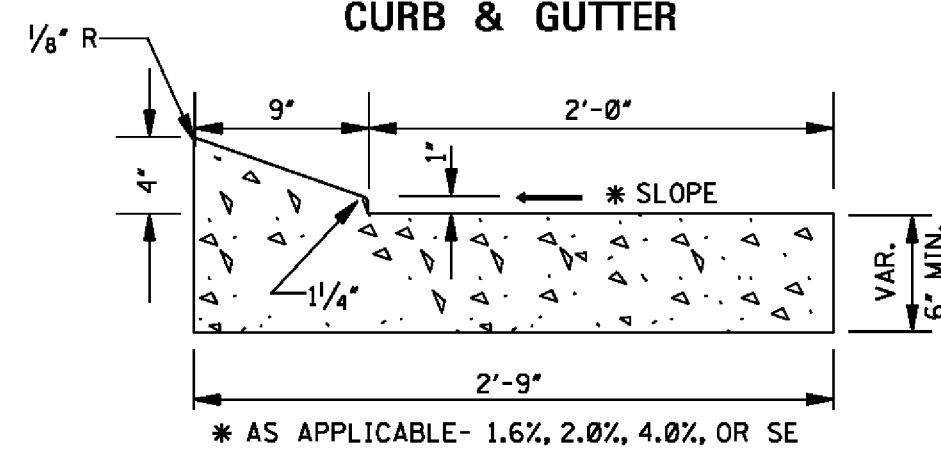


SECTION C-C

SECTION D-D

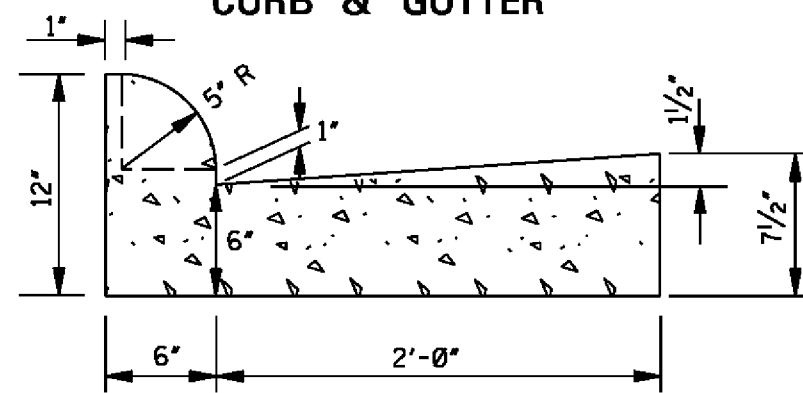


TYPE "1"
DETAIL OF COMBINATION
CURB & GUTTER

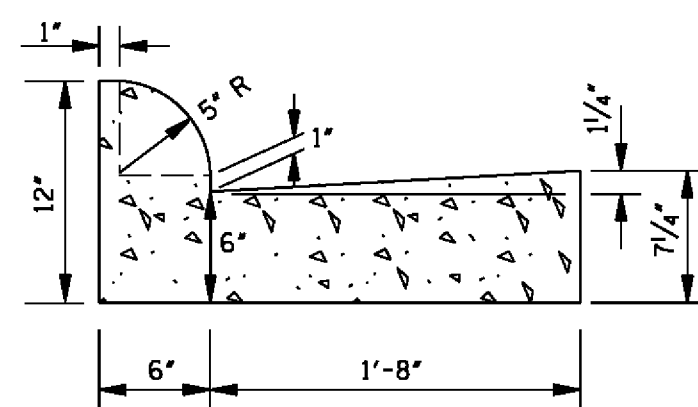


TYPE "2"

DETAIL OF COMBINATION
CURB & GUTTER

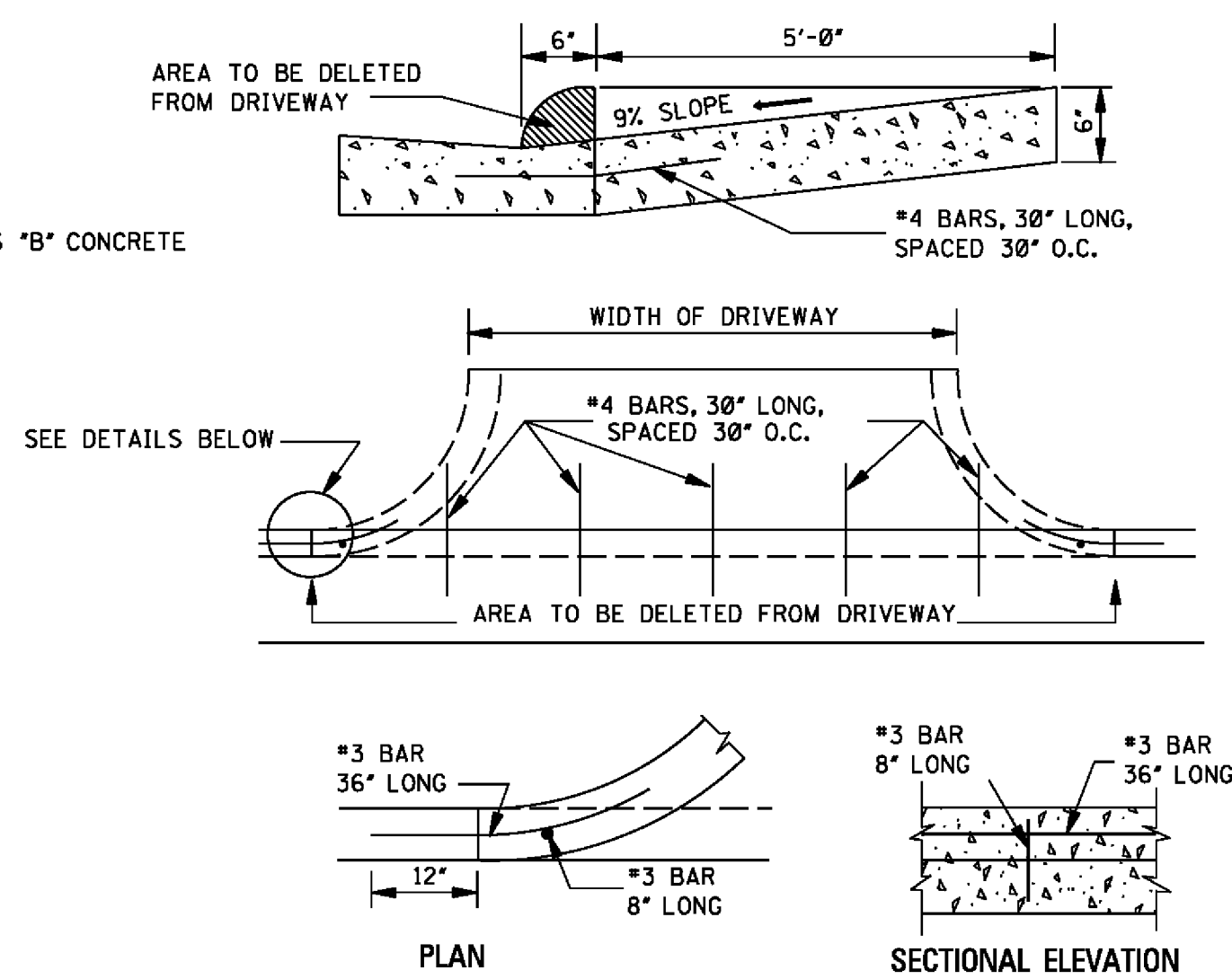


TYPE "3A"
DETAIL OF COMBINATION
CURB & GUTTER



TYPE "3B"

DETAIL OF COMBINATION CURB & GUTTER



PERMISSIBLE DRIVEWAY CONSTRUCTION METHOD FOR SLIP-FORM PLACEMENT OF CURB & GUTTER

- GENERAL NOTES:
1. TRAVERSE CONTRACTION JOINTS ARE REQUIRED AT 20' ON CENTER FOR ALL CONCRETE DRIVEWAYS THAT EXTEND PAST THE END OF THE CURB RETURN. A 1/2" WIDE EXPANSION JOINT IS REQUIRED AT THE END OF THE CURB RETURN AND AT 60' ON CENTER THROUGHOUT THE LENGTH OF THE DRIVEWAY. A LONGITUDINAL CONTRACTION JOINT IS REQUIRED FOR ALL DRIVEWAYS EXCEEDING 20' IN WIDTH.
 2. SEE WK. NOS. CR-1, CR-2, CR-3 & CR-4 FOR DETAILS OF CURB-CUT RAMPS.
 3. MAXIMUM 2% CROSS-SLOPE ON SIDEWALKS.

							BY	MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN							
							REVISION	<i>DRIVEWAYS, CURB & GUTTER, & SIDEWALK</i>							
							DATE	ISSUE DATE: AUGUST 01, 2017							 WORKING NUMBER SD-1 SHEET NUMBER 6419



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Alan Howe, Director of the Water Department

cc:

Date: Tuesday, January 7, 2020

Re: Approve specifications and authorize publication of advertisement for Term Bid Item #11 - Chlorine Gas & Sulfur Dioxide for the Water Department.
File Number: 2020-20
Minute Book #

Summary

Approve Specifications and Authorize Publication of Advertisement for Term Bid Item #11 - Chlorine Gas & Sulfur Dioxide for the Water Department

Recommendation Statement

Please Approve Specifications and Authorize Publication of Advertisement for Term Bid Item #11 - Chlorine Gas & Sulfur Dioxide for the Water Department

Please place this on the January 7, 2020 City Council meeting for consideration.

NOTICE TO BIDDERS

ITEM #11:

CHLORINE GAS & SULFUR DIOXIDE FOR THE WATER DEPARTMENT

Notice is hereby given that the Mayor and Council of the City of Hattiesburg will receive bids in the following manner:

Proposals will be accepted until 10:00 a.m. on Thursday, February 6th, 2020, by electronic bid submission or in sealed envelopes at the Office of the City Clerk, 200 Forrest Street, Hattiesburg, MS 39401. A bid form is provided in the specifications. The bid form should be filled out and uploaded by the date and time stated above.

Specifications and procedures can be obtained upon request at the Office of the City Clerk or can be downloaded from Central Bidding at www.centralbidding.com. All bids must comply with the specifications provided. The City of Hattiesburg reserves the right to amend the specifications, as necessary, and agrees to notify all having requested bid packets.

Submissions will be evaluated and vendors submitting acceptable offers will be invited to submit priced bids via reverse auction. Reverse auction bids can be submitted at www.centralbidding.com. For any questions relating to the electronic bidding process, please call Central Bidding at 225-810-4814.

Qualified bidders will be invited to participate in a reverse auction, which will take place on Thursday, February 20th, 2020, at 10:00 a.m.

Questions regarding specifications should be directed to Alan Howe at 601-545-4530. Questions regarding the bidding process should be directed to Central Bidding at 225-810-8414.

The City reserves the right to extend the auction time or date if necessary to complete the pre-qualification process.

The lowest and best bid received will be accepted, subject to the provisions of Section 31-7-13 of the Mississippi Code of 1972, Annotated as Amended, and other applicable state law; but the City reserves the right to reject all bids and to waive formalities.

Published by Order of the Council on this, the 7th day of January, 2020.

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

**SPECIFICATIONS FOR ITEM # 11: CHLORINE GAS AND SULFUR DIOXIDE FOR
THE CITY OF HATTIESBURG WATER DEPARTMENT**

Bidder shall bid on furnishing Chlorine Gas, which meets or exceeds the following specifications, to-wit:

100% active Chlorine Gas suitable for water purification, in 150-pound and one (1) ton containers.

Sulfur Dioxide suitable for water dichlorination in one (1) ton containers.

Price shall include delivery by truck equipped with loading and unloading mechanism to handle containers at point of delivery. No overhead lifting facilities available at point of delivery.

Must meet all requirements of AWWA Standard #B301-81.

The City of Hattiesburg will only accept bids for products manufactured and assembled/packaged in plants located in the United States. Written Certification shall be provided upon request of Hattiesburg Water Department Officials.

PAYMENT TERMS: Remittance within forty-five (45) days from satisfactory delivery of goods and/or receipt of invoice(s).

PRICES shall be FIRM for a period beginning with the official acceptance of the bids, and ending September 30, 2022, items to be purchased as required.

The City of Hattiesburg and/or the vendor has the option to terminate the contract after a period of one year.

DELIVERY: Within twenty-four (24) hours after issuance of purchase order, F.O.B. Hattiesburg, Mississippi, as indicated on Purchase Order, freight prepaid to all the following locations located within the city limits of Hattiesburg, Mississippi:

Methodist Tank	450 Weathersby Road
4 th Street Well	3320 W 4 th Street
USM Tank and Well	2811 W 4 th Street
North Lagoon	3401 Lakeview Road
South Lagoon	1903 E Hardy Street
FGH Tank and Well	6051 US Hwy 49 South
Water Plant 1	5010 Old Hwy 42
Water Plant 2	900 James Street

NOTE: DELIVERY OF CHLORINE GAS CYLINDERS BY REAR TANDEM AXLE VEHICLE IS NOT POSSIBLE DUE TO RESTRICTED ACCESS. DELIVERY SHALL BE ACOMPLISHED BY SINGLE AXLE VEHICLE TO THE ABOVE LOCATIONS.

The lowest and best bid received will be accepted, subject to the provisions of Section 21-7-13 of the Mississippi Code of 1972, Annotated as Amended, and other applicable State Law; but the Council reserves the right to reject any and all bids received and to waive informalities.

Approved on this, the 7th day of January, 2020.

City of Hattiesburg, Mississippi

By: _____
CITY CLERK

SPECIFICATIONS APPROVED BY:

WATER DEPARTMENT

ITEM #11
**CHLORINE GAS AND SULFUR DIOXIDE FOR
THE CITY OF HATTIESBURG WATER DEPARTMENT**

ITEM	UNIT	PRICE
CHLORINE-150 LB. CONTAINERS		
CHLORINE-1 TON CONTAINERS		
SULFUR DIOXIDE- 1 TON CONTAINERS		
TOTAL BID PRICE		\$

Name of Company

Street / P.O. Address

City / State / Zip Code

Phone / Fax Numbers

Date of Bid

Official's Name and Title

Official's Signature



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ronnie Perkins, Director of Public Works

cc:

Date: Tuesday, January 7, 2020

Re: Approve specifications and authorize publication of advertisement for Term Bid Item #23 - Corrugated HDPE Drainage Pipe for the Public Services Department.
File Number: 2020-21
Minute Book #

Summary

Approve specifications and authorize publication of advertisement for Term Bid Item #23 - Corrugated HDPE Drainage Pipe for the Public Services Department.

Recommendation Statement

I recommend the council Approve specifications and authorize publication of advertisement for Term Bid Item #23 - Corrugated HDPE Drainage Pipe for the Public Services Department.

Please place this on the January 7, 2020 City Council meeting for consideration.

NOTICE TO BIDDERS

ITEM #23:

CORRUGATED HDPE DRAINAGE PIPE FOR THE PUBLIC SERVICES DEPARTMENT

Notice is hereby given that the Mayor and Council of the City of Hattiesburg will receive bids in the following manner:

Proposals will be accepted until 10:00 a.m. on Thursday, February 6th, 2020, by electronic bid submission or in sealed envelopes at the Office of the City Clerk, 200 Forrest Street, Hattiesburg, MS 39401. A bid form is provided in the specifications. The bid form should be filled out and uploaded by the date and time stated above.

Specifications and procedures can be obtained upon request at the Office of the City Clerk or can be downloaded from Central Bidding at www.centralbidding.com. All bids must comply with the specifications provided. The City of Hattiesburg reserves the right to amend the specifications, as necessary, and agrees to notify all having requested bid packets.

Submissions will be evaluated and vendors submitting acceptable offers will be invited to submit priced bids via reverse auction. Reverse auction bids can be submitted at www.centralbidding.com. For any questions relating to the electronic bidding process, please call Central Bidding at 225-810-4814.

Qualified bidders will be invited to participate in a reverse auction, which will take place on Thursday, February 20th, 2020, at 10:00 a.m.

Questions regarding specifications should be directed to Ronnie Perkins at 601-545-4648. Questions regarding the bidding process should be directed to Central Bidding at 225-810-8414.

The City reserves the right to extend the auction time or date if necessary to complete the pre-qualification process.

The lowest and best bid received will be accepted, subject to the provisions of Section 31-7-13 of the Mississippi Code of 1972, Annotated as Amended, and other applicable state law; but the City reserves the right to reject all bids and to waive formalities.

Published by Order of the Council on this, the 7th day of January, 2020.

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

**SPECIFICATIONS FOR ITEM #23: CORRUGATED HDPE DRAINAGE PIPE FOR THE PUBLIC
SERVICES DEPARTMENT**

Bidder shall bid on furnishing Corrugated HDPE Drainage Pipe for the Public Services Department, which meets or exceeds the following specifications to-wit:

All corrugated HDPE drainage pipe shall be in accordance with ASTM D 1248, ASTM D 3350, ASTM D 2412, ASTM F 667, ASTM F 405 and AASHTO M 294. Smooth interior plastic pipe will have a Manning's "N" coefficient in a range of 0.012 to 0.015. Corrugated plastic pipe will be self coupling to comply with ASTM F477 and D3212 specifications for Elastomeric seals (gaskets) for joining plastic pipe.

Prices will be required for the following sizes:

SMOOTH INTERIOR PIPE WITH RUBBER GASKET JOINTS			
SIZE	PER LINEAR FOOT	SIZE	PER LINEAR FOOT
12"		30"	
15"		36"	
18"		42"	
24"		48"	

DELIVERY: F.O.B. Hattiesburg, Mississippi, to the address shown on the Purchase Order. All deliveries shall be within the Corporate Limits of the City of Hattiesburg, within fifteen (15) days from receipt of Purchase Order.

PRICES shall be FIRM for a period beginning with the official acceptance of the winning bid, and ending September 30, 2022, items to be purchased as required.

The City of Hattiesburg and/or the vendor has the option to terminate the contract after a period of

one year.

PAYMENT TERMS: Remittance within thirty (30) days from satisfactory delivery of goods and/or receipt of invoice(s).

The lowest and best bid received will be accepted, subject to the provisions of Section 31-7-13 of the Mississippi Code of 1972, Annotated as Amended, and other applicable State law; but the Council reserves the right to reject any and all bids received and to waive informalities.

APPROVED on this, the 7TH day of January A. D., 2020.

CITY OF HATTIESBURG, MISSISSIPPI

BY: _____

CITY CLERK

SPECIFICATIONS APPROVED BY:

PUBLIC SERVICES DEPARTMENT

ITEM #23: CORRUGATED HDPE DRAINAGE PIPE FOR THE PUBLIC SERVICES DEPARTMENT

SMOOTH INTERIOR PIPE WITH RUBBER GASKET JOINTS			
SIZE	PER LINEAR FOOT	SIZE	PER LINEAR FOOT
12"		30"	
15"		36"	
18"		42"	
24"		48"	

Name of Company

Street / P.O. Address

City / State / Zip Code

Phone / Fax Numbers

Date of Bid

Official's Name and Title

Official's Signature



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Sylvester London, Division Manager

cc:

Date: Tuesday, January 7, 2020

Re: Acknowledge receipt of the two quote docket as provided for in section 31-7-13 (b) of the Mississippi Code of 1972, for the period of September November 25, 2019 through December 26, 2019
File Number: 2020-23
Minute Book #

Summary

Acknowledge receipt of the two quote docket as provided for in section 31-7-13 (b) of the Mississippi Code of 1972

Recommendation Statement

Attached is the unadvertised bid docket for the period of November 25, 2019 through December 26, 2019, covering purchases requiring the obtaining of a minimum of two (2) bids as defined in Section 31-7-13 (B) of the Mississippi Code.

This report is submitted for your review, approval, and acknowledgement on the minutes of the City Council. Should there be any questions, please feel free to contact my office.

Please place this on the January 7, 2020 City Council meeting for consideration.

BILL TO: CITY OF HATTIESBURG
 ACCOUNTING DEPT
 PO BOX 1898
 HATTIESBURG, MS 39403-1898
 FAX INVOICE TO: 601-545-6661

THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432
 POINT OF CONTACT:

PURCHASE ORDER
 CITY OF HATTIESBURG

Page Date
 - - 12/05/19

PO No. 195204
 Req No. 2909

VENDOR MAILING:
 AB SUPPORT SERVICES
 5891 HWY 49
 STE 60 BOX 122
 HATTIESBURG MS 39402

LONDON, SYLVESTER
 MINUTE BOOK # PENDING
 VENDOR # 00113877

(601) 5454512
 SHIP TO :
 CITY OF HATTIESBURG
 NOT APPLICABLE

PROJECT LINE: JANITORIAL CLEANING SERVICE FOR FOUR DEPARTMENTS				PROCESSING CODE:	
Account #	Description	QTY	UM	UNIT COST	TOTAL COST
009660.6870	WATER BILLING 105 SOUTH PARK AV PRICE PER WEEK (52 WEEKS)	52.00	EA	126.9200	6,599.84
001203.6870	ENGINEERING 212 WEST FRONT STREET PRICE PER WEEK (52 WEEKS)	52.00	EA	98.0800	5,100.16
073570.6870	HUB CITY TRANSIT 1001 S TIPTON ST PRICE PER WEEK (52 WEEKS)	52.00	EA	69.2300	3,599.96
001191.6870	TRAFFIC/CONSTRUCTIO 125 WALNUT ST PRICE PER WEEK (52 WEEKS)	52.00	EA	75.0000	3,900.00

TOTAL CONTRACT AMOUNT NOT TO EXCEED 19,199.96

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

QUOTE REQUEST RESPONSE FORM

Page No. 11/18/19
Date 2909 00
Order Number

AB-SUPPORT SERVICES
5891 HWY 49
STE 60, BOX 122
HATTIESBURG MS 39402

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 AG Support Services

SIGNATURE [Signature] DATE 11/15/2019

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: JANITORIAL CLEANING SERVICE FOR FOUR DEPARTMENTS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
WATER BILLING 105 SOUTH PARK AV PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$126.93	\$6,600	11/18/19	11/18/19
ENGINEERING 212 WEST FRONT STREET PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$98.03	\$5,100	11/18/19	11/18/19
HUB CITY TRANSIT 1001 S TIPTON ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$69.23	\$3,600	11/18/19	11/18/19
TRAFFIC/CONSTRUCTION 125 WALNUT ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$75.00	\$3,900	11/18/19	11/18/19

TOTAL BID PRICE \$19,200

[Handwritten Signature]



QUOTE REQUEST RESPONSE FORM

Page No. : 1
Date : 11/18/19
Order Number : 2909 OQ

ANointed HANDS SERVICES,
PO BOX 853
HATTIESBURG MS 39403-0853

Mail To. : CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number : 601 5454512

Shipping terms are F.O.B. destination, freight prepaid

PRINTED NAME: Sharon Bobbitt
SIGNATURE: Sharon Bobbitt
DATE: 11/26/19

PROJECT LINE: JANITORIAL CLEANING SERVICE FOR FOUR DEPARTMENTS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
WATER BILLING 105 SOUTH PARK AV PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	520.00	4,240.00	1-2-20	1-1-2021
ENGINEERING 212 WEST FRONT STREET PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	445.00	5,340.00	1-2-20	1-1-2021
HUB CITY TRANSIT 1001 S TIPTON ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	310.00	3,720.00	1-2-20	1-1-2021
TRAFFIC/CONSTRUCTION 125 WALNUT ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	345.00	4,140.00	1-2-20	1-1-2021

Total

TOTAL BID PRICE \$19,440.00

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 11/18/19
Order Number 2909 00JANI-KING OF SOUTH EAST M
22 MILLBRANCH ROAD SUITE
HATTIESBURG MS 39402Mail To: CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST 2ND FLOOR
PO BOX 1398
HATTIESBURG MS 39401

PRINTED NAME Chance Mercante

Phone Number 601 5454512

SIGNATURE  DATE 11-26-19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: JANITORIAL CLEANING SERVICE FOR FOUR DEPARTMENTS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
WATER BILLING 105 SOUTH PARK AV PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$137.12	\$7,129.98	11-26-19	05-26-20
ENGINEERING 212 WEST FRONT STREET PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$112.93	\$5,872.52	11-26-19	05-26-20
HUB CITY TRANSIT 1001 S TIPTON ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$63.51	\$3,302.54	11-26-19	05-26-20
TRAFFIC/CONSTRUCTIO 125 WALNUT ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	\$78.52	\$4,083.14	11-26-19	05-26-20

TOTAL BID PRICE \$20,388.18

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

Page No. : : : 1
Date : : : 11/18/19
Order Number : : : 2909 QQ

MAMA FER, LLC
1321 HARDY STREET, SUITE
HATTIESBURG MS 39401

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 E/ot B. Rob
SIGNATURE [Signature] DATE 11/23/19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: JANITORIAL CLEANING SERVICE FOR FOUR DEPARTMENTS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
WATER BILLING 105 SOUTH PARK AV PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	470.87	24,485.24		
ENGINEERING 212 WEST FRONT STREET PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	262.02	13,625.04		
HUB CITY TRANSIT 1001 S TIPTON ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	186.66	9,706.32		
TRAFFIC/CONSTRUCTION 125 WALNUT ST PRICE PER WEEK (52 WEEKS)	11/18/19	52.00	EA	241.86	12,576.72		

TOTAL BID PRICE 60,393.32

BILL TO: CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
PURCHASE ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

POINT OF CONTACT:

WAGGONER, ROBIN
MINUTE BOOK # PENDING
VENDOR # 00113343

SHIP TO :
CITY OF HATTIESBURG
WATER PLANT #2
900 JAMES STREET
HATTIESBURG MS 39401

Page
Date 12/04/19

PO No. 195151

Req No. 2911

VENDOR MAILING:
SPARTAN TOOL, LLC
1506 DIVISION STREET
MENDOTA IL 61342

PROJECT LINE: MODULAR CAMERA SYSTEM

Account # 009676.5590

Description

QTY 1.00

EA 8,545.2500

UNIT COST

UM

TOTAL COST 8,545.25

PROCESSING CODE:

SEND METHOD 1 (888)8762371

MODULAR CAMERA SYS

ONE MODULAR CAMERA SYSTEM UTILIZING ONE CONTROL BOX THAT IS

COMPATIBLE WITH MULTIPLE PUSH ROD/CAMERA COMBINATIONS HAVE

THE ABILITY TO REACH OUT 200' HAVE AN ALL-WEATHER WATERPROOF

CONSTRUCTION/ 1P 64 RATED OPEN AND CLOSED, 800 X 600 RGB

RESOLUTION 12V DC / 115V-230V AC SUPER-BRIGHT

SUNLIGHT READABLE LCD DISPLAY WITH AUTO BRIGHTNESS SUPER-

BRIGHT LED ILLUMINATION FOR CAMERA, METERAGE COUNTER, FREEZE-

FRAME SNAPSHOT CAPABILITY AT ANY TIME, SYSTEM HEALTH STATUS,

MPEG4 VIDEO FORMAT.

TOTAL CONTRACT AMOUNT NOT TO EXCEED 8,545.25

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.

KERMAE EATON
CITY CLERK

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

SPARTAN TOOL, LLC
1506 DIVISION STREET
MENDOTA IL 61342

Page No. :
Date : 11/26/19
Order Number : 2911 QQ

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 Holly Anderson
SIGNATURE Holly Anderson DATE 12-12-19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: MODULAR CAMERA SYSTEM

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
MODULAR CAMERA SYS ONE MODULAR CAMERA SYSTEM UTILIZING ONE CONTROL BOX THAT IS COMPATIBLE WITH MULTIPLE PUSH ROOF CAMERA CONSTRUCTIONS HAVE THE ABILITY TO REACH OUT 200 FEET HAVE AN ALL-WEATHER WATERPROOF CONSTRUCTION/ IS 64 RATED OPEN AND CLOSED 800 V 400 RMS RESOLUTION 12V DC / 220V AC 10.4" SUPER-BRIGHT RGB SUNLIGHT READABLE LCD DISPLAY WITH AUTO BRIGHTNESS SUPER-BRIGHT LED ILLUMINATION FOR CAMERA METERAGE COOLER-FREEZE FRAME SHOTS CAPABILITY AT ANY TIME. SYSTEM HEALTH STATUS. MPEG4 VIDEO FORMAT.	11/26/19	1.00	EA	\$8975.00	\$8,975.25	12/19/19	1/9/19

TOTAL BID PRICE \$8,545.25



Handwritten signature

12/4/19



SPARTAN

Sales Order Acknowledgement

Thank you for your order. If you have any questions regarding the products you purchased or need assistance with selecting additional products, please contact me or our customer service team.

Contact Customer

customer@spartantool.com
800-435-3866

Receipt Number: 221119161624

Customer Number: 289530

Order Date: 11/19/2019 4:23:00 PM

PO # QUOTE

Shipping Address

Company HATTIESBURG CITY OF HSG
Address 900 James Street
Apt/Unit#

City Hattiesburg

State MS

Postal Code: 39404

City HATTIESBURG

State MS

Postal Code: 39404

Phone 601 467 7939

Email mbryant@hattiesburg.ms.com

Comments / Information: **** QUOTATION ONLY ****

Payment Details

Item Number	Serial Number	Description	Sold	Delivered	Price	Disc %	Extended Price
6405L200		EXPLORER L200	1	0	\$8995.00	5	\$8545.25

Payment Type Label
Payment Value Label

Spartan Tool LLC 1506 West
Division St. Mendota, IL
61342 www.spartantool.com

Your final invoice with actual
freight and sales tax amounts
will be forthcoming

Remit To: Spartan Tool LLC
25582 Network Place Chicago,
IL 60673-1255

Subtotal: \$8545.25
Sales Tax: \$0.00
Shipping: \$0.00
Total: \$8545.25



SPARTAN

Professional Sewer and Drain Cleaning Equipment

Signature

First Name (please print)	Last Name (please print)
---------------------------	--------------------------

NOTE: this is not a final invoice. The final invoice is subject to change from shipping, taxes, etc.

Spartan Tool LLC 1506 West
Division St. Mendota, IL
61342 www.spartantool.com

Your final invoice with actual
freight and sales tax amounts
will be forthcoming

Remit To: Spartan Tool LLC
25382 Network Place Chicago,
IL. 60673-1255

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 11/26/19
Order Number 2911 OQSANSOM EQUIPMENT CO
PO BOX 360041
BIRMINGHAM AL 35236Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . . 601 5454512

PRINTED NAME

Josh Strong

SIGNATURE

DATE 11-26-19

PROJECT LINE: MODULAR CAMERA SYSTEM

Shipping terms are F.O.B. destination, freight prepaid

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
MODULAR CAMERA SYS ONE MODULAR CAMERA SYSTEM UTILIZING ONE CONTROL BOX THAT IS COMPATIBLE WITH MULTIPLE PUSH ROD/CAMERA COMBINATIONS HAVE THE ABILITY TO REACH OUT 200' HAVE AN ALL-WEATHER WATERPROOF CONSTRUCTION/ 1P-64 RATED OPEN AND CLOSED 800 X 600 RGB RESOLUTION 12V DC / 115V-230V AC SUPER-BRIGHT SUNLIGHT READABLE LCD DISPLAY WITH AUTO BRIGHTNESS SUPER-BRIGHT LED ILLUMINATION FOR CAMERA, METERAGE COUNTER FREEZE-FRAME SNAPSHOT CAPABILITY AT ANY TIME. SYSTEM HEALTH STATUS. MPEG4 VIDEO FORMAT.	11/26/19	1.00	EA	9,100.00	9,100.00	Immediate	12-31-19

TOTAL BID PRICE

\$9,100.00

BILL TO: CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
PURCHASER ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

Page
Date

12/02/19

VENDOR MAILING:
LIONSQUARE EQUIPMENT
dba EQUIPMENT INC
PO BOX 1987
JACKSON MS 39215-1987

WAGGONER ROBIN
MINUTE BOOK #
VENDOR #

(601) 5454630
PENDING
00062496

SHIP TO :
CITY OF HATTIESBURG
WATER PLANT #2
900 JAMES STREET
HATTIESBURG MS 39401

PO No. 195106
Req No. 2912

PROCESSING CODE:

PROJECT LINE: HYDRAULIC BREAKER WITH NAIL POINT

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
009676.7399	HYDRAULIC BREAKER HB980 HYDRAULIC BREAKER W/ NAIL POINT: TO INCLUDE HOSE KIT (LONG ARM) -HB980/HB1180&NB160 TO INCLUDE X-CHANGE MOUNTING CAP-HB880/HB980/NB150/NB160 & PLATE COMPACTOR-PCF64	1.00	EA	7,750.8000	7,750.80

TOTAL CONTRACT AMOUNT NOT TO EXCEED 7,750.80

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.

KERMAE EATON
CITY CLERK

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

Page No. 1
Date 11/26/19
Order Number 2912 00

ELONSQUARE EQUIPMENT
dba EQUIPMENT INC
PO BOX 1987
JACKSON MS 39215-1987

Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

PRINTED NAME *Josh Hayes*

Phone Number . . . 601 5454512

SIGNATURE *[Signature]* DATE _____

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: HYDRAULIC BREAKER WITH NAIL POINT

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
HYDRAULIC BREAKER HS980 HYDRAULIC BREAKER W/ NAIL POINT: TO INCLUDE HOSE KIT (LONG ARM) -HS980/BN180&BN160 TO INCLUDE X-CHANGE MOUNTING CAP-HS880/HS980/BN150/BN160 & FLATE COMPACTOR-PCF-64	11/26/19	1.00	EA	7750.80		12-1	12-30

TOTAL BID PRICE 7750.80



CRK

12/2/19

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMEMERY EQUIPMENT SALES & R
12181 AIRLINE HWY
BATON ROUGE LA 70817Page No. 1
Date 11/26/19
Order Number 2912 00Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W. FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . . 601 5454512

PRINTED NAME Kelly EmerySIGNATURE Kelly EmeryDATE 12-2-19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: HYDRAULIC BREAKER WITH NAIL POINT

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
HYDRAULIC BREAKER HB980 HYDRAULIC BREAKER W/ NAIL POINT: TO INCLUDE HOSE KIT (LONG ARM)-HB980/HB1180&NB160 TO INCLUDE A CHANGE MOUNTING CAP-HB880/HB980/NB150/NB160 & PLATE COMPACTOR-PCF64	11/26/19	1.00	EA	9,069.00	9,069.00	12-9-19	6-1-20

TOTAL BID PRICE \$ 9069.00

BILL TO:
CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
PURCHASE ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432
POINT OF CONTACT:

CITY OF HATTIESBURG
TRAFFIC
125 WALNUT ST
HATTIESBURG MS 39401

VENDOR MAILING:
VULCAN SIGNS
408 E. BERRY AVE
PO BOX 1850
FOLEY AL 36536-1850

BIVINS, REDONDA
MINUTE BOOK # PENDING
VENDOR # 90010749

PO No. 195236
Req No. 2913

Page Date 12/05/19

PROJECT LINE: SIGNAGE FOR CITY WIDE USE				PROCESSING CODE:	
Account #	Description	QTY	SEND METHOD 1		TOTAL COST
			UM	UNIT COST	
001191.5545	ITEM: 0857414 R1-1 30" OCT HIP RSA STOP	50.00	EA	23.1100	1,155.50
001191.5545	ITEM: 0857438 OM-3R 12 X 36 HIP RSA RIGHT OBJECT MARKER	20.00	EA	11.1600	223.20
001191.5545	ITEM: 0850158 OM-3L 12X 36 HIP RSA LEFT OBJECT MARKER	20.00	EA	11.1600	223.20
001191.5545	ITEM: 0850744 W10-1 36" CIR HIP RSA RAILROAD CROSSING SYMBOL	20.00	EA	22.2300	444.60
001191.5545	ITEM: 0850738 R5-1A 36 X 24 HIP RSA WRONG WAY	10.00	EA	22.3200	223.20
001191.5545	ITEM: 0850726 R5-1 30" SQ HIP RSA DO NOT ENTER	10.00	EA	23.2500	232.50
001191.5545	ITEM: 0850783 W15-1 36" DIA HIP RSA PLAYGROUND SYMBOL	10.00	EA	33.4800	334.80
001191.5545	ITEM: 0850650 W8-1 30" DIA HIP RSA BUMP	5.00	EA	23.2500	116.25
001191.5545	ITEM: 0850851 W1-6 48 X 24 HIP RSA SINGLE ARROW	10.00	EA	29.7600	297.60
001191.5545	ITEM: 0850852 W1-7 48 X 24 HIP RSA DOUBLE ARROW	10.00	EA	29.7600	297.60
001191.5545	ITEM: 0850637 W14 - 1 30" DIA HIP RSA DEAD END	20.00	EA	23.2500	465.00
001191.5545	ITEM: 0850434 R2-1-15 24 X 30 HIP RSA SPEED LIMIT 15	10.00	EA	18.6000	186.00
001191.5545	ITEM: 0850435 R2-1-20 24 X 30 HIP RSA SPEED LIMIT 20	15.00	EA	18.6000	279.00
001191.5545	ITEM: 0850436 R2-1-25 24 X 30 HIP RSA SPEED LIMIT 25	15.00	EA	18.6000	279.00
001191.5545	ITEM: 0850437 R2-1-30 24 X 30 HIP RSA SPEED LIMIT 30	20.00	EA	18.6000	372.00
001191.5545	ITEM: 0850438 R2-1-35 24 X 30 HIP RSA SPEED LIMIT 35	20.00	EA	18.6000	372.00
001191.5545	ITEM: 0850297	10.00	EA	18.6000	186.00

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 11/26/19
Order Number 2913 00VULCAN SIGNS
408 E BERRY AVE
PO BOX 1850
POLEY AL 36536-1850Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . . 601 5454512

PRINTED NAME David B. Benavidez
SIGNATURE David B. Benavidez DATE 12/4/2019

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: SIGNAGE FOR CITY WIDE USE

ITEM: 0857414	ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
RI-1 30" OCT HIP RSA STOP		11/26/19	50.00	EA	23.11	1,155.50	30 days ARO	30
ITEM: 0857438								
OM-3R 12 X 36 HIP RSA RIGHT OBJECT MARKER		11/26/19	20.00	EA	11.16	223.20	30 DAY ARO	30
ITEM: 0850155								
OM-3L 12X 36 HIP RSA LEFT OBJECT MARKER		11/26/19	20.00	EA	11.16	223.20	30 DAY ARO	30
ITEM: 0850744								
W10-1 36" CIR HIP RSA RAILROAD CROSSING SYMBOL		11/26/19	20.00	EA	22.23	444.60	30 DAY ARO	30
ITEM: 0850738								
R5-1A 36 X 24 HIP RSA WRONG WAY		11/26/19	10.00	EA	22.32	223.20	30 DAY ARO	30
ITEM: 0850726								
R5-1 30" SQ HIP RSA DO NOT ENTER		11/26/19	10.00	EA	23.25	232.50	30 DAY ARO	30
ITEM: 0850783								
W15-1 36" DIA HIP RSA PLAYGROUND SYMBOL		11/26/19	10.00	EA	33.48	334.80	30 DAY ARO	30
ITEM: 0850650								
W8-1 30" DIA HIP RSA BUMP		11/26/19	5.00	EA	23.25	116.25	30 DAY ARO	30



David B. Benavidez

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

PROJECT LINE: SIGNAGE FOR CITY WIDE USE

Page No. : 2
Date : 11/26/19
Order Number : 2913 QQ

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
ITEM: 0850851 W1-6 48 X 24 HIP RSA SINGLE ARROW	11/26/19	10.00	EA	29.76	297.60	30 DAY ARO	30
ITEM: 0850852 W1-7 48 X 24 HIP RSA DOUBLE ARROW	11/26/19	10.00	EA	29.76	297.60	30 DAY ARO	30
ITEM: 0850637 W14 - 1 30" DIA HIP RSA DEAD END	11/26/19	20.00	EA	23.25	465.00	30 DAY ARO	30
ITEM: 0850434 R2-1-15 24 X 30 HIP RSA SPEED LIMIT 15	11/26/19	10.00	EA	18.60	186.00	30 DAY ARO	30
ITEM: 0850435 R2-1-20 24 X 30 HIP RSA SPEED LIMIT 20	11/26/19	15.00	EA	18.60	279.00	30 DAY ARO	30
ITEM: 0850436 R2-1-25 24 X 30 HIP RSA SPEED LIMIT 25	11/26/19	15.00	EA	18.60	279.00	30 DAY ARO	30
ITEM: 0850437 R2-1-30 24 X 30 HIP RSA SPEED LIMIT 30	11/26/19	20.00	EA	18.60	372.00	30 DAY ARO	30
ITEM: 0850438 R2-1-35 24 X 30 HIP RSA SPEED LIMIT 35	11/26/19	20.00	EA	18.60	372.00	30 DAY ARO	30
ITEM: 0850297 R6-2L 18 X 24 HIP RSA ONE WAY: LEFT ARROW	11/26/19	10.00	EA	18.60	186.00	30 DAY ARO	30
ITEM: 0850298 R6-2R 18 X 24 HIP RSA ONE WAY: RIGHT ARROW	11/26/19	10.00	EA	11.16	111.60	30 DAY ARO	30
ITEM: 0857432	11/26/19	50.00	EA	11.16	558.00	30 DAY ARO	30

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

PROJECT LINE: SIGNAGE FOR CITY WIDE USE

Page No. : 3
Date : 11/26/19
Order Number : 2913 00

ITEM DESCRIPTION		Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
R1-3 12 X 6 HIP RSA 4-WAY								
ITEM:0850141 R7-1 12 X 18 HIP RSA NO PARKING ANY TIME		11/26/19	50.00	EA	2.40	120.00	30 DAY ARO	30
ITEM:0852438 R20-5A 18 X 24 HIP RSA NO DUMPING		11/26/19	20.00	EA	11.16	223.20	30 DAY ARO	30
ITEM:1050078 18" OBJ MKR Y/Y 9 BUTTON		11/26/19	10.00	EA	17.95	179.50	30 DAY ARO	30
ITEM:0850994 M4-9L 30 X 24 HIP RSA DETOUR W/LEFT ARROW		11/26/19	20.00	EA	18.60	372.00	30 DAY ARO	30
ITEM:0850993 M4-9R 30 X 24 HIP RSA DETOUR W/RIGHT ARROW		11/26/19	20.00	EA	18.60	372.00	30 DAY ARO	30
ITEM:0850856 R11-2R 48 X 30 HIP RSA ROAD CLOSED		11/26/19	20.00	EA	37.20	744.00	30 DAY ARO	30
ITEM:0850880 R11-4R 60 X 30 HIP RSA ROAD CLOSED TO THRU TRAFFIC		11/26/19	20.00	EA	46.50	930.00	30 DAY ARO	30
ITEM:1050076 18" OBJ MKR R/R 9 BUTTON		11/26/19	20.00	EA	17.95	359.00	30 DAY ARO	30

TOTAL BID PRICE 9,656.74

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMCUSTOM PRODUCTS CORP
PO BOX 54091
JACKSON MS 39288-4091Page No. 1
Date 11/26/19
Order Number 2913 OQMail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . 601 5454512

PRINTED NAME Chad Douglas
SIGNATURE Chad Douglas DATE 11/26/19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: SIGNAGE FOR CITY WIDE USE

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
ITEM: 0857414 ✓ R1-1 30" OCT HIP RSA STOP	11/26/19	50.00	EA	29.59			
ITEM: 0857438 ✓ OM-3R 12 X 36 HIP RSA RIGHT OBJECT MARKER	11/26/19	20.00	EA	15.21			
ITEM: 0850158 ✓ OM-3L 12X 36 HIP RSA LEFT OBJECT MARKER	11/26/19	20.00	EA	15.21			
ITEM: 0850744 ✓ W10-1 36" CIR HIP RSA RAILROAD CROSSING SYMBOL	11/26/19	20.00	EA	44.32			
ITEM: 0850738 ✓ R5-1A 36 X 24 HIP RSA WRONG WAY	11/26/19	10.00	EA	30.31			
ITEM: 0850726 ✓ R5-1 30" SQ HIP RSA DO NOT ENTER	11/26/19	10.00	EA	31.57			
ITEM: 0850783 ✓ W15-1 36" DIA HIP RSA PLAYGROUND SYMBOL	11/26/19	10.00	EA	45.90			
ITEM: 0850650 ✓ W8-1 30" DIA HIP RSA BUMP	11/26/19	5.00	EA	31.57			

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 2
Date 11/26/19
Order Number 2913 QQ

PROJECT LINE: SIGNAGE FOR CITY WIDE USE

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
ITEM: 0850851 W1-6 48 X 24 HIP RSA SINGLE ARROW	11/26/19	10.00	EA	40.41			
ITEM: 0850852 W1-7 48 X 24 HIP RSA DOUBLE ARROW	11/26/19	10.00	EA	40.41			
ITEM: 0850637 W14 - 1 30" DIA HIP RSA DEAD END	11/26/19	20.00	EA	30.67			
ITEM: 0850434 R2-1-15 24 X 30 HIP RSA SPEED LIMIT 15	11/26/19	10.00	EA	25.96			
ITEM: 0850435 R2-1-20 24 X 30 HIP RSA SPEED LIMIT 20	11/26/19	15.00	EA	25.24			
ITEM: 0850436 R2-1-25 24 X 30 HIP RSA SPEED LIMIT 25	11/26/19	15.00	EA	25.24			
ITEM: 0850437 R2-1-30 24 X 30 HIP RSA SPEED LIMIT 30	11/26/19	20.00	EA	25.24			
ITEM: 0850438 R2-1-35 24 X 30 HIP RSA SPEED LIMIT 35	11/26/19	20.00	EA	25.24			
ITEM: 0850297 R6-2L 18 X 24 HIP RSA ONE WAY: LEFT ARROW	11/26/19	10.00	EA	15.64			
ITEM: 0850298 R6-2R 18 X 24 HIP RSA ONE WAY: RIGHT ARROW	11/26/19	10.00	EA	15.64			
ITEM: 0857432	11/26/19	50.00	EA	5.49			

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

PROJECT LINE: SIGNAGE FOR CITY WIDE USE

Page No. 3
Date 11/26/19
Order Number 2913 QQ

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
R1-3 12 X 6 HIP RSA 4-WAY							
✓ ITEM: 0850141 R7-1 12 X 18 HIP RSA NO PARKING ANY TIME	11/26/19	50.00	EA	8.36			
✓ ITEM: 0852438 R20-5A 18 X 24 HIP RSA NO DUMPING	11/26/19	20.00	EA	15.21			
✓ ITEM: 1050078 18" OBJ MKR Y/Y 9 BUTTON	11/26/19	10.00	EA	23.28			
✓ ITEM: 0850994 M4-9L 30 X 24 HIP RSA DETOUR W/LEFT ARROW	11/26/19	20.00	EA	25.24			
✓ ITEM: 0850993 M4-9R 30 X 24 HIP RSA DETOUR W/RIGHT ARROW	11/26/19	20.00	EA	25.24			
✓ ITEM: 0850856 R11-2R 48 X 30 HIP RSA ROAD CLOSED	11/26/19	20.00	EA	49.08			
✓ ITEM: 0850880 R11-4R 60 X 30 HIP RSA ROAD CLOSED TO THRU TRAFFIC	11/26/19	20.00	EA	61.35			
✓ ITEM: 1050076 18" OBJ MKR R/R 9 BUTTON	11/26/19	20.00	EA	22.18			

TOTAL BID PRICE 12,862.05

BILL TO:	CITY OF HATTIESBURG	Page	1
CITY OF HATTIESBURG	P U R C H A S E O R D E R	Date	12/20/19
ACCOUNTING DEPT	THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432		
PO BOX 1898			
HATTIESBURG, MS 39403-1898	POINT OF CONTACT:	PO No.	195664
FAX INVOICE TO: 601-545-6661		Req No.	2914

VENDOR MAILING:
GRAY BUILDERS
1714 EDWARDS STREET
HATTIESBURG MS 39401

WAITS, SHARON	
MINUTE BOOK	#
PENDING	
VENDOR	#
00074101	

(601) 5454640

SHIP TO :
CITY OF HATTIESBURG
ENGINEERING/PUBLIC SERVICES
212 WEST FRONT STREET-CENTENNIAL BLDG
HATTIESBURG MS 39401

PROCESSING CODE:

PROJECT LINE: FURNISH AND INSTALL BATTING CAGE COVER AT DAHMER PARK

SEND METHOD 1 ()

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
086300.7295.18	SEE ATTACHED SPECS	1.00	EA	44,500.0000	44,500.00

SEE ATTACHED SPECS
Vendor shall furnish and install a metal/steel Battering Cage building at Vernon Dahmer Park over existing batting cage concrete slabs as per the attached specifications and drawings.

TOTAL CONTRACT AMOUNT NOT TO EXCEED

44,500.00

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.

KERMAS EATON
CITY CLERK

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

Page No. 1
 Date 12/04/19
 Order Number 2914 QQ

GRAY BUILDERS
 1714 EDWARDS STREET
 HATTIESBURG MS 39401

Mail To, CITY OF HATTIESBURG
 PURCHASING DIVISION
 220 W FRONT ST. 2ND FLOOR
 PO BOX 1898
 HATTIESBURG MS 39401

PRINTED NAME

GRAY BUILDERS
 Joe Gray

SIGNATURE

DATE

Phone Number . . . 601 5454512

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: FURNISH AND INSTALL BATTING CAGE COVER AT DAHMER PARK

ITEM DESCRIPTION

SEE ATTACHED SPECS

Vendor shall furnish and install a metal/steel Batting Cage
 building at Vernon Dahmer Park over existing batting cage
 concrete slabs as per the attached specifications and
 drawings.

Request
Date

12/04/19

QTY

1.00

UM

EA

Unit
Price

44,500

Extended
Cost

44,500

Delivery Date

1/30/20

Expired
Date

3/10/20

TOTAL BID PRICE \$44,500⁰⁰

[Signature]



CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date - 12/04/19
Order Number : : 2914 OQB W SULLIVAN BUILDING COON
4451 HWY 49
HATTIESBURG MS 39401Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

PRINTED NAME

B.W. Sullivan Building Contractors, Inc.

Phone Number . . 601 5454512

SIGNATURE

Scott Humphrey DATE *12-19-19*

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: FURNISH AND INSTALL BATTING CAGE COVER AT DAHMER PARK

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
SEE ATTACHED SPECS	12/04/19	1.00	EA	47,900. ⁰⁰	47,900. ⁰⁰	2-14-20	1-19-20

Vendor shall furnish and install a metal/steel Batting Cage

building at Vernon Dahmer Park over existing batting cage concrete slabs as per the attached specifications and drawings.

TOTAL BID PRICE *\$47,900.⁰⁰*

BILL TO: CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
P U R C H A S E O R D E R
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

Page Date 12/12/19

PO No. 195401

Req No. 2915

VENDOR MAILING:
PLUM CREEK ENVIRONMENTAL
1302 EAST INDUSTRIAL ACCESS ROAD
WEST POINT MS 39773

EVANS, TERESA WILLIAMS (601) 5454626

MINUTE BOOK # PENDING

VENDOR # 00109291

SHIP TO:
CITY OF HATTIESBURG
PUBLIC WORKS DEPT
1202 JAMES STREET
HATTIESBURG MS 39401

PROCESSING CODE:

PROJECT LINE: GREEN AND BROWN GARBAGE CANS

Account # Description QTY UNIT COST TOTAL COST

001220.7399 95 MIL GREEN CAN 250.00
ALL CARTS INCLUDE THE FOLLOWING: 10" DIAMETER INJECTION
MOLDED WHEELS, SOLID STEEL AXLE AND METAL FRONT BAR: CITY
LOGO HOT STAMP ON EACH SIDE OF CART BODY: SEQUENTIAL SERIAL
NUMBER HOT STAMP ON EACH CONTAINER, 10 YEAR NON-PRORATED
WARRANTY ON ANY MANUFACTURER DEFECTS. PLEASE INCLUDE FREIGHT
NOT TO EXCEED OVER \$35,000

001220.7399 95 MIL BROWN CAN 150.00
ALL CARTS INCLUDE THE FOLLOWING: 10" DIAMETER INJECTION
MOLDED WHEELS, SOLID STEEL AXLE AND METAL FRONT BAR: CITY
LOGO HOT STAMP ON EACH SIDE OF CART BODY: SEQUENTIAL SERIAL
NUMBER HOT STAMP ON EACH CONTAINER, 10 YEAR NON-PRORATED
WARRANTY ON ANY MANUFACTURER DEFECTS. PLEASE INCLUDE FREIGHT

TOTAL CONTRACT AMOUNT NOT TO EXCEED

26,860.00

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.

KERMAE EATON
CITY CLERK

43530

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

Page No. 1
Date 12/04/19
Order Number 2915 00

PLUM CREEK ENVIRONMENTAL
1302 EAST INDUSTRIAL ACCE
WEST POINT MS 39773

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 Andrew Wamble

SIGNATURE [Signature] DATE 12/4/19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: GREEN AND BROWN GARBAGE CANS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
95 MIL GREEN CAN ALL CANS INCLUDE THE FOLLOWING: 10" DIAMETER INJECTION MOLDED WHEELS, SOLID STEEL AXLE AND METAL FRONT BAR: CITY LOGO HOT STAMP ON EACH SIDE OF CART BODY: SEQUENTIAL SERIAL NUMBER HOT STAMP ON EACH CONTAINER. 10 YEAR NON-PRORATED WARRANTY ON ANY MANUFACTURER DEFECTS. PLEASE INCLUDE FREIGHT NOT TO EXCEED OVER \$35,000	12/04/19	250.00	EA	67.15	16,787.50	4 weeks	1/4/20

95 MIL BROWN CAN
ALL CANS INCLUDE THE FOLLOWING: 10" DIAMETER INJECTION MOLDED WHEELS, SOLID STEEL AXLE AND METAL FRONT BAR: CITY LOGO HOT STAMP ON EACH SIDE OF CART BODY: SEQUENTIAL SERIAL NUMBER HOT STAMP ON EACH CONTAINER. 10 YEAR NON-PRORATED WARRANTY ON ANY MANUFACTURER DEFECTS. PLEASE INCLUDE FREIGHT NOT TO EXCEED OVER \$35,000

150.00 EA 67.15 10,072.50 4 weeks 1/4/20

TOTAL BID PRICE \$26,860.00



[Signature]

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 12/04/19
Order Number 2915 OQOTTO ENVIRONMENTAL SYSTEM
12700 GENERAL DRIVE
CHARLOTTE NC 28273Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . . 601 5454512

Shipping terms are F.O.B. destination, freight prepaid

PRINTED NAME Michael Costello, President
SIGNATURE  DATE 12/10/19

PROJECT LINE: GREEN AND BROWN GARBAGE CANS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
95 MIL GREEN CAN ALL CARTS INCLUDE THE FOLLOWING: 10" DIAMETER INJECTION MOLDED WHEELS, SOLID STEEL AXLE AND METAL FRONT BAR: CITY LOGO HOT STAMP ON EACH SIDE OF CART BODY: SEQUENTIAL SERIAL NUMBER HOT STAMP ON EACH CONTAINER, 10 YEAR NON-PRORATED WARRANTY ON ANY MANUFACTURER DEFECTS. PLEASE INCLUDE FREIGHT NOT TO EXCEED OVER \$35,000	12/04/19	250.00	EA	\$68.00	\$17,000.00	30 days	06/10/20
95 MIL BROWN CAN ALL CARTS INCLUDE THE FOLLOWING: 10" DIAMETER INJECTION MOLDED WHEELS, SOLID STEEL AXLE AND METAL FRONT BAR: CITY LOGO HOT STAMP ON EACH SIDE OF CART BODY: SEQUENTIAL SERIAL NUMBER HOT STAMP ON EACH CONTAINER, 10 YEAR NON-PRORATED WARRANTY ON ANY MANUFACTURER DEFECTS. PLEASE INCLUDE FREIGHT	12/04/19	150.00	EA	\$68.00	\$10,200.00	30 days	06/10/20

TOTAL BID PRICE \$27,200.00

BILL TO: CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
PURCHASE ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

POINT OF CONTACT:

ACKER, REBECCA
MINUTE BOOK # PENDING
VENDOR # 00101509

VENDOR MAILING:
DANIEL HOBSON
dba PRECISION FAB & REFURBISHING INC
15 CAMP ROAD
HATTIESBURG MS 39401

Page Date 12/23/19

PO No. 195703

Req No. 2916

SHIP TO :
CITY OF HATTIESBURG
NOT APPLICABLE

PROCESSING CODE:

PROJECT LINE: REPLACE, REPAIR AND INSTALL AWNING AT TRAIN DEPOT

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
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001093.6350	AWNING REPAIR THE DAMAGED AWNING WILL NEED TO BE REPAIRED, REPAINTED AND INSTALLED (REPLACED) AT TRAIN DEPOT. THE WORK WILL NEED TO BE COMPLETED BEFORE DECEMBER 19TH TO ENSURE WE HAVE ADEQUATE TIME FOR THE INSTALLATION OF THE PANELS AND LIGHT FIXTURES TO BE INSTALLED THAT WERE DAMAGED FROM A PREVIOUS ACCIDENT.	1.00	EA	8,426.0000	8,426.00
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TOTAL CONTRACT AMOUNT NOT TO EXCEED 8,426.00

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.

KERMAE EATON
CITY CLERK

DATE 12/03/19
Order Number : 2916 00

QUOTE REQUEST ACCORDANCE FORM

DANIEL HOBSON
dba PRECISION FAB & REFUR
15 CAMP ROAD
HATTIESBURG MS 39401

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 Daniel Hobson

SIGNATURE Daniel Hobson DATE 12/12/19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: REPLACE, REPAIR AND INSTALL AWNING AT TRAIN DEPOT

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
AWNING REPAIR	12/12/19	1.00	EA	8426.00	8426.00	11/30/20	11/12/20

THE DAMAGED AWNING WILL NEED TO BE REPAIRED, REPAINTED AND
INSTALLED (REPLACED) AT TRAIN DEPOT. THE WORK WILL NEED TO BE
COMPLETED BEFORE DECEMBER 19TH TO ENSURE WE HAVE ADEQUATE
TIME FOR THE INSTALLATION OF THE PANELS AND LIGHT FIXTURES
TO BE INSTALLED THAT WERE DAMAGED FROM A PREVIOUS ACCIDENT.

TOTAL BID PRICE \$8,426.00

[Handwritten signature]



CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 12/18/19
Order Number 2916 00MICHAEL E NELSON, SR
dba MYKEL'S HANDYMAN SERV
58 DEMPSEY CONN ROAD
HATTIESBURG MS 39401Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401PRINTED NAME Mykel's Handyman Service

Phone Number . . 601 5454512

SIGNATURE Michael E. Nelson DATE 12-19-19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: REPLACE, REPAIR AND INSTALL AWNING AT TRAIN DEPOT

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
AWNING REPAIR THE DAMAGED AWNING WILL NEED TO BE REPAIRED, REPAINTED AND INSTALLED (REPLACED) AT TRAIN DEPOT. THE WORK WILL NEED TO BE COMPLETED BEFORE DECEMBER 19TH TO ENSURE WE HAVE ADEQUATE TIME FOR THE INSTALLATION OF THE PANELS AND LIGHT FIXTURES TO BE INSTALLED THAT WERE DAMAGED FROM A PREVIOUS ACCIDENT.	12/12/19	1.00	EA	\$10,875.00	\$10,875.00	1-30-20	1-30-20

TOTAL BID PRICE \$ 10,875.00

BILL TO: CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
PURCHASE ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

POINT OF CONTACT:

VENDOR MAILING:
3J SPORTS INC
dba PLAY IT AGAIN SPORTS
4400 HARDY STREET, SUITE A-12
HATTIESBURG MS 39402

MONTGOMERY, LINDA (601) 5454623

VENDOR # 00081970

SHIP TO :
CITY OF HATTIESBURG
REC-RECREATION CENTER(OLD YMCA)
300 N 12TH AVENUE
HATTIESBURG MS 39401

Page 1
Date 12/18/19

PO No. 195594

Req No. 2917

PROJECT LINE: HPR:BASKETBALL JERSEYS 2019

PROCESSING CODE:

SEND METHOD 1 (601)2688917

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
002315.5510	BBJ MESH JERSEYS COLORS LOGO AND DESCRIPTIONS OF JERSEYS WILL BE SUPPLIED BY CITY OF HATTIESBURG PARKS AND RECREATION DEPARTMENT JERSEYS MUST BE DELIVERED BY ON OR BEFORE DECEMBER 30, 2019.	500.00	EA	13.0000	6,500.00
002315.5510	COACHES 100% COTTON T-SHIRTS WITH 1 COLOR LOGO FRONT/BACK.	50.00	EA	6.0000	300.00

TOTAL CONTRACT AMOUNT NOT TO EXCEED

6,800.00

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

3J SPORTS INC
c/o PLAY IT AGAIN SPORTS
4200 HARRY STREET
HATTIESBURG MS 39402

PRINTED NAME Play It Again Sports
SIGNATURE [Signature] DATE 12/17

PROJECT NAME: HPR-BASKETBALL JERSEYS 2019

ITEM DESCRIPTION

BEJ MESH JERSEYS
COLORS, LOGO AND DESCRIPTIONS OF JERSEYS WILL BE SUPPLIED
BY CITY OF HATTIESBURG PARKS AND RECREATION DEPARTMENT
JERSEYS MUST BE DELIVERED BY ON OR BEFORE DECEMBER 30, 2019.

COACHES/COACHES
T-SHIRTS WITH 1 COLOR LOGO FRONT/BACK.

Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
12/09/19	500.00	EA	13	6500	14 days after order	
12/09/19	50.00	EA	6.00	300	14 days after order	
				TOTAL BID PRICE 6800		

QUOTE REQUEST RESPONSE FORM

Date Order Number : : 12/16/19 2917 00

Mail To, CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . 601 5454512

Shipping terms are F.O.B. destination, freight prepaid

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 12/16/19
Order Number 2917 OQB S N SPORTS
4849 ALPHA ROAD
DALLAS TX 75244Mail To: CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number 601 5454512

PRINTED NAME BLAN A. LUNASIGNATURE [Signature] DATE 12.18.19

PROJECT LINE: HPR-BASKETBALL JERSEYS 2019

Shipping terms are F.O.B. destination, freight prepaid

ITEM DESCRIPTION

Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
12/09/19	500.00	EA	18 ⁰²	9000	11/18	11/31/19
HBJ MESH JERSEYS COLORS, LOGO AND DESCRIPTIONS OF JERSEYS WILL BE SUPPLIED BY CITY OF HATTIESBURG PARKS AND RECREATION DEPARTMENT. JERSEYS MUST BE DELIVERED BY ON OR BEFORE DECEMBER 30, 2019.						
12/09/19	50.00	EA	3	650	01/18	01/31/19
COACHES 100% COTTON T-SHIRTS WITH 1 COLOR LOGO FRONT/BACK.						

TOTAL BID PRICE 9650

BILL TO: CITY OF HATTIESBURG
 ACCOUNTING DEPT
 PO BOX 1898
 HATTIESBURG, MS 39403-1898
 FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
 PURCHASE ORDER
 THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

Page
 Date

12/13/19

VENDOR MAILING:
 TEMPLE INC
 50 DAVIS ST NE
 PO BOX 2066
 DECATUR AL 35602-2066

BIVINS, REDONDA
 MINUTE BOOK # PENDING
 VENDOR # 00002206

POINT OF CONTACT:
 (601) 5454626

SHIP TO :
 CITY OF HATTIESBURG
 TRAFFIC
 125 WALNUT ST
 HATTIESBURG MS 39401

PROJECT LINE: CAMERA, FAN, AND THERMOSTAT FOR SIGNALS

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
001191.5540	E10007 TS-15-A"TEM -STAT SWITCH" THERMOSTAT, BUD INDUSTRIES, FLANGE MOUNT	20.00	EA	30.0000	600.00
001191.5540	ZFA100 100 CFM AXIAL FAN (4" BOS FAN) {USED IN CABINET ASSY}	20.00	EA	25.0000	500.00
001191.5540	EDGE2-2N-PAK EDGE EDGE 2 INTERSECTION PACKAGE, ITERIS, 2-CAMERA INPUT, 12/24VDC:	2.00	EA	3,610.0000	7,220.00

PROCESSING CODE:

SEND METHOD 1 (256)3534578

TOTAL CONTRACT AMOUNT NOT TO EXCEED 8,320.00

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.

KERIAS EATON
 CITY CLERK

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

TEMPLE, INC.
50 DAVIS ST NE
PO BOX 2066
DECATUR AL 35602-2066

Page No. 1
Date 12/12/19
Order Number 2918 OQ

Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . . 601 5454512

Shipping terms are F.O.B. destination, freight prepaid

PRINTED NAME Delilah Mitchell
SIGNATURE Delilah Mitchell DATE 12/12/19

PROJECT LINE: CAMERA, FAN, AND THERMOSTAT FOR SIGNALS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
E10007 TS-15-A*TEM -STAT SWITCH THERMOSTAT, BUD INDUSTRIES, FLANGE MOUNT	12/11/19	20.00	EA	30.00	600.00	4-6 weeks	
ZEAL00 100 CFM AXIAL FAN (4" BOS FAN) (USED IN CABINET ASSY)	12/11/19	20.00	EA	25.00	500.00	4-6 weeks	
EDGE2-2N-PAK EDGE EDGE 2 INTERSECTION PACKAGE, ITERIS, 2-CAMERA INPUT, 12/24VDC	12/11/19	2.00	EA	3610.00	7,220.00	4-6 weeks	

TOTAL BID PRICE 8,320.00



Delilah Mitchell

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date - 12/12/19
Order Number 2918 OQPOWELL CONSTRUCTION SERVI
15461 NORTHRUP CEUEVAS RD
GULFPORT MS 39503Mail To. CITY OF HATTIESBURG
PURCHASING DIVISION
220 W. FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . 601 5454512

PRINTED NAME Powell Construction Services, IncSIGNATURE William E. Powell DATE 12/12/2019

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: CAMERA, FAN, AND THERMOSTAT FOR SIGNALS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
E10007 TS-15-A" TEM -STAT SWITCH" THERMOSTAT, BUD INDUSTRIES, FLANGE MOUNT	12/11/19	20.00	EA	\$ 37.50	3750.00	1/6/19	1/12/19
ZFA100 100 CFM AXIAL FAN (4" BOS FAN) {USED IN CABINET ASSY}	12/11/19	20.00	EA	\$ 31.25	\$ 625.00	1/6/19	1/12/19
EDGE2-2N-PAK EDGE EDGE 2 INTERSECTION PACKAGE, ITERIS, 2-CAMERA INPUT, 12/24VDC:	12/11/19	2.00	EA	\$ 4151.50	\$ 8303.00	1/6/19	1/12/19

TOTAL BID PRICE \$9,608.00

BILL TO: CITY OF HATTIESBURG
 ACCOUNTING DEPT
 PO BOX 1898
 HATTIESBURG, MS 39403-1898
 FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
 PURCHASE ORDER
 THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

PO No. - 195566
 Req No. - 2923

POINT OF CONTACT:

BIVINS, REDONDA
 MINUTE BOOK # PENDING
 VENDOR # 00111008

(601) 5454626

SHIP TO :
 CITY OF HATTIESBURG
 TRAFFIC
 125 WALNUT ST
 HATTIESBURG MS 39401

PROJECT LINE: SPEED HUMPS

PROCESSING CODE:
 SEND METHOD 1 (847)9661205

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
001191.5540	RUBBER SPEED HUMP MIDDLE PIECE 35"W X 24" L X 2.25" H	100.00	EA	50.0000	5,000.00
001191.5540	RUBBER SPEED HUMP FEMALE END CAP 35"W X 17.5" L X 2.25" H	8.00	EA	30.0000	240.00
001191.5540	RUBBER SPEED HUMP MALE END CAP 35"W X 17.5" L X 2.25" H	8.00	EA	30.0000	240.00
001191.5540	REBAR SPIKES FOR SPEED BUMPS/PARKING STOPS SINGLE PIECE - 14" SPIKE & WASHER	680.00	EA	2.9500	2,006.00

TOTAL CONTRACT AMOUNT NOT TO EXCEED 7,486.00

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.

KERNAS EATON
 CITY CLERK

TO Sylvester

MUNICO CORP
dba TRAFFIC SAFETY WAREHO
PO BOX 1125
DEERFIELD IL 60015-1125

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

Page No. 1
Date 12/12/19
Order Number 2923 00

Mail To: CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

PRINTED NAME Mary McKenna
SIGNATURE *Mary McKenna* DATE 12/16/19
Phone Number 501 5454512 Fax 601 545-6661

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: SPEED HUMPS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
RUBBER SPEED HUMP MIDDLE PIECE 35"X24" 1X2.25" H SH36	12/11/19	100.00	EA	50.00	5000	5/19/20	6/15/20
RUBBER SPEED HUMP FEMALE END CAP 35" WX17.5" LX 2.25" H SHECF	12/11/19	8.00	EA	30.00	240.00		
RUBBER SPEED HUMP MALE END CAP 35" W X 17.5" L X 2.25" H SHLCM	12/11/19	8.00	EA	30.00	240.00		
REBAR SPIKES FOR SPEED BUMPS/PARKING STOPS SINGLE PIECE 7 14" SPIKE & WASHER	12/11/19	680.00	EA	2.95	2006.00		

X Asphalt

TOTAL BID PRICE \$ 7486.00



plus

FRT 779.00

[Signature]

TRANSAGE INC
1625 SPECTRUM DR STE 100
LAWRENCEVILLE GA 30043-57

Mail To . . . CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

PRINTED NAME

Lisa Brown

SIGNATURE

[Signature]

DATE 12.16.19

PROJECT LINE: SPEED BUMPS

Phone Number . . 601 5454512

Shipping terms are F.O.B. destination, freight prepaid

Date - . . . 12/12/19
Order Number . . . 2923 00

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
RUBBER SPEED HUMP MIDDLE PIECE 35" WX 24" LX 2.25" H	12/11/19	100.00	EA	71.90	7190.00	12/20/19	1.7.20
RUBBER SPEED HUMP FEMALE END CAP 35" WX 17.5" LX 2.25" H	12/11/19	8.00	EA	54.05	432.40		
RUBBER SPEED HUMP MALE END CAP 35" W X 17.5" L X 2.25" H	12/11/19	8.00	EA	54.05	432.40		
REBAR SPIKES FOR SPEED BUMPS/PARKING STOPS SINGLE PIECE - 14" SPIKE & WASHER	12/11/19	680.00	EA	3.39	2,305.20		

* does not include washer

TOTAL BID PRICE 10,320.00

Speed bumps come with a 4" anchor, screw, washer

BILL TO: CITY OF HATTIESBURG
CITY OF HATTIESBURG
ACCOUNTING DEPT
PO BOX 1898
HATTIESBURG, MS 39403-1898
FAX INVOICE TO: 601-545-6661

CITY OF HATTIESBURG
PURCHASE ORDER
THE CITY IS NOT LIABLE FOR SALES TAX ID# 64-6000432

POINT OF CONTACT:

PO No. 195473
Req No. 2924

Page Date 12/13/19

VENDOR MAILING:
TEMPLE INC
50 DAVIS ST NE
PO BOX 2066
DECATUR AL 35602-2066

BIVINS REDONDA
MINUTE BOOK # PENDING
VENDOR # 00002206

(601) 5454626

SHIP TO:
CITY OF HATTIESBURG
TRAFFIC
125 WALNUT ST
HATTIESBURG MS 39401

PROCESSING CODE:

PROJECT LINE: SCHOOL ZONE BEACONS

Account #	Description	QTY	UM	UNIT COST	TOTAL COST
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001191.5540	CARMANAH R829G DUAL SOLAR SCHOOL ZONE BEACON ASSY R829G-DUAL-Y-Y-4.5" POLY	6.00	EA	4,005.0000	24,030.00
001191.5540	12'PED POLE ASSEMBLY	6.00	EA	670.0000	4,020.00

SUBMIT SEPARATE INVOICES FOR EACH ORDER. PREPAY SHIPPING CHARGES IF ANY AND ADD TO INVOICE.

TOTAL CONTRACT AMOUNT NOT TO EXCEED 28,050.00

FOR CORRECTIONS TO VENDOR ADDRESS ABOVE CONTACT ACCOUNTING (601) 545-4686.

KERMA EATON
CITY CLERK

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORM

TEMPLE INC
50 DAVIS ST NE
PO BOX 2066
DECATUR AL 35602-2066

Page No.
Date
Order Number

12/12/19
2924 00

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

Debbie Mitchell

SIGNATURE

Debbie Mitchell DATE 12/13/19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: SCHOOL ZONE BEACONS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
CARMANAH R829G DUAL SOLAR SCHOOL ZONE BEACON ASSY R829G-DUAL-Y-Y-4.5" POLY	12/11/19	6.00	EA	4,005.00	24,030.00	4 weeks	
12' PED POLE ASSEMBLY	12/11/19	6.00	EA	670.00	4,020.00	4 weeks	

TOTAL BID PRICE 28,050.00



Debbie Mitchell

CITY OF HATTIESBURG
QUOTE REQUEST RESPONSE FORMPage No. 1
Date 12/12/19
Order Number 2924 OQPOWELL CONSTRUCTION SERVI
15461 NORTHRUP CEUEVAS RD
GULFPORT MS 39503Mail To CITY OF HATTIESBURG
PURCHASING DIVISION
220 W FRONT ST. 2ND FLOOR
PO BOX 1898
HATTIESBURG MS 39401

Phone Number . . 601 5454512

PRINTED NAME Powell Construction Services, Inc
SIGNATURE William Deall DATE 12/13/19

Shipping terms are F.O.B. destination, freight prepaid

PROJECT LINE: SCHOOL ZONE BEACONS

ITEM DESCRIPTION	Request Date	QTY	UM	Unit Price	Extended Cost	Delivery Date	Expired Date
CARMANAH R829G DUAL SOLAR SCHOOL ZONE BEACON ASSY R829G-DUAL-Y-Y-4.5" POLY	12/11/19	6.00	EA	4,405.00	26,430.00	1/30/20	1/13/20
12' PED POLE ASSEMBLY	12/11/19	6.00	EA	737.00	4,422.00	1/30/20	1/13/20

TOTAL BID PRICE 30,852.00

MEMORANDUM

TO: Mayor and Council
FROM: Michael Pope
DATE: December 27, 2019
SUBJECT: Unadvertised Bid Docket Acknowledgement

Attached is the unadvertised bid docket for the period of November 25, 2019 through December 26, 2019, covering purchases requiring the obtaining of a minimum of two (2) bids as defined in Section 31-7-13 (B) of the Mississippi Code.

This report is submitted for your review, approval, and acknowledgement on the minutes of the City Council. Should there be any questions, please feel free to contact my office.

MAP

SUCCESSFUL BID/ OTHER BID	BID RECEIVED	BID AWARDED	BID AMOUNT	PURCHASE ORDER	ITEM DESCRIPTION
EQUIPMENT INC EMERY EQUIPMENT SALES & RENTALS, INC	11/27/19 12/02/19	12/02/19 12/02/19	7,750.80 9,069.00	195106	HYDRAULIC BREAKER WITH NAIL POINT
SPARTAN TOOL, LLC SANSOM EQUIPMENT CO	12/02/19 11/26/19	12/04/19 12/04/19	8,545.25 9,100.00	195151	MODULAR CAMERA SYSTEM
AB SUPPORT SERVICES ANOINTED HANDS SERVICES, LLC	11/25/19 11/26/19	12/05/19 12/05/19	19,199.96 19,440.20	195204	JANITORIAL CLEANING SERVICE FOR FOUR DEPART
JANI-KING OF SOUTH EAST MISSISSIPPI MAMA FER, LLC	11/26/19 11/23/19	12/05/19 12/05/19	20,388.16 60,393.32		
VULCAN SIGNS CUSTOM PRODUCTS CORP	12/04/19 12/02/19	12/05/19 12/05/19	9,656.75 12,862.05	195236	SIGNAGE FOR CITY WIDE USE
PLUM CREEK ENVIRONMENTAL OTTO ENVIRONMENTAL SYS NA(CONTAINER)	12/04/19 12/10/19	12/12/19 12/12/19	26,860.00 27,200.00	195401	GREEN AND BROWN GARBAGE CANS
TEMPLE INC POWELL CONSTRUCTION SERVICES INC	12/13/19 12/13/19	12/13/19 12/13/19	28,050.00 30,852.00	195473	SCHOOL ZONE BEACONS
TEMPLE INC POWELL CONSTRUCTION SERVICES INC	12/12/19 12/12/19	12/13/19 12/13/19	8,320.00 9,678.00	195474	CAMERA, FAN, AND THERMOSTAT FOR SIGNALS
TRAFFIC SAFETY WAREHOUSE TRANSafe INC	12/16/19 12/16/19	12/18/19 12/18/19	7,486.00 10,360.00	195566	SPEED HUMPS
PLAY IT AGAIN SPORTS B S N SPORTS	12/17/19 12/18/19	12/18/19 12/18/19	6,800.00 9,650.00	195594	HPR:BASKETBALL JERSEYS 2019
GRAY BUILDERS SULLIVAN, B W BLDG CONTRACTOR INC	12/19/19 12/19/19	12/20/19 12/20/19	44,500.00 47,900.00	195664	FURNISH AND INSTALL BATTING CAGE COVER AT D
PRECISION FAB & REFURBISHING, INC MYKEL'S HANDYMAN SERVICE	12/12/19 12/19/19	12/23/19 12/23/19	8,426.00 10,875.00	195703	REPLACE, REPAIR AND INSTALL AWNING AT TRAIN



Memorandum

To: Mayor Toby Barker and Members of City Council
From: Chris McGee, Director of Parks and Recreation
cc:
Date: Tuesday, January 7, 2020
Re: Approve the sale of grave spaces, per attached Memo's, Receipts, and Deeds.
File Number: 2020-19
Minute Book #

Summary

Approve the sale of grave spaces, per attached Memo's, Receipts, and Deeds.

Recommendation Statement

I am recommending approval of Requisition No. 2019-437, Approve the sale of grave spaces.

Please place this on the January 7, 2020 City Council meeting for consideration.

To: CITY COUNCIL

From: Deborah Bourne, Assistant Division Manager of Cemeteries

Date: December 10, 2019

The following represents the grave spaces sold on December 10, 2019.

Melina Childs

(1) Space \$ 150.00 (Debit Card)

East Half (E ½) of the Northwest Quarter (NW ¼)

Lot 76, Section 1, South Hill Cemetery

William LeRoy & Margaret Burger

(2) Spaces \$ 350.00

Southwest Quarter (SW ¼)

Lot 45, Section 1, South Hill Cemetery

To: CITY COUNCIL

From: Deborah Bourne, Assistant Division Manager of Cemeteries

Date: December 11, 2019

The following represents the grave spaces sold on December 11, 2019.

Frank J. Glenn

(1) Space \$ 175.00 (Debit Card)

North Half (N ½) of the Northeast Quarter (NE ¼)

Lot 49, Section 34, Highland Cemetery

Emanuel Earl Williams

(1) Space \$ 175.00

North Half (N ½) of the Northwest Quarter (NW ¼)

Lot 38, Section 35, Highland Cemetery

To: CITY COUNCIL

From: Deborah Bourne, Assistant Division Manager of Cemeteries

Date: December 13, 2019

The following represents the grave spaces sold on December 13, 2019.

Lillie M. Cooper

(1) Space \$ 175.00

North Half (N ½) of the Northeast Quarter (NE ¼)

Lot 33, Section 36, Highland Cemetery

Melvin Cooper, Sr

(1) Space \$ 175.00

South Half (S ½) of the Northeast Quarter (NE ¼)

Lot 33, Section 36, Highland Cemetery

To: CITY COUNCIL

From: Deborah Bourne, Assistant Division Manager of Cemeteries

Date: December 16, 2019

The following represents the grave spaces sold on December 16, 2019.

Herman Barnes

(1) Space \$ 175.00 (Debit Card)

South Half (S ½) of the Southeast Quarter (SE ¼)

Lot 87, Section 37, Highland Cemetery

Mary Ola Barber

(1) Space \$ 175.00

South Half (S ½) of the Northwest Quarter (NW ¼)

Lot 22, Section 35, Highland Cemetery

John Edward Barber, Sr

(1) Space \$ 175.00

North Half (N ½) of the Southwest Quarter (SW ¼)

Lot 22, Section 35, Highland Cemetery

To: CITY COUNCIL

From: Deborah Bourne, Assistant Division Manager of Cemeteries

Date: December 19, 2019

The following represents the grave spaces sold on December 19, 2019.

Philip Gatwood

(2) Spaces \$ 350.00

Northeast Quarter (NE ¼)

Lot 104, Section 38, Highland Cemetery

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 12-10- 20 19

SOLD TO:

Mr. (Mrs.) Miss Melina Childs

ADDRESS 9745 Tideview Court Villa Rica, GA 30180

desires to purchase the grave space described below, subject to Cemetery regulations.

E $\frac{1}{2}$ NW $\frac{1}{4}$ Lot No. 76 Section No. 1 in South Hill Cemetery

Number of grave spaces 1 Price per grave space \$ 150.00

Price Received \$ 150.00

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 12/09/ 20 19

SOLD TO:

Mr. Mrs. Miss William LeRoy & Margaret Burger

ADDRESS P.O. Box 1952, Hattiesburg, ms. 39403

desires to purchase the grave space described below, subject to Cemetery regulations.

- $\frac{1}{2}$ SW $\frac{1}{4}$ Lot No. 45 Section No. 1 in South Hill Cemetery

Number of grave spaces 2 Price per grave space \$ 150.00

Price Received \$ 300.00

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Burre
Supt. of City Cemeteries

ck# 2292
Ed. B. R. [unclear]

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 12/11/ 2019

SOLD TO:

Mr.. Mrs. Miss Frank J. Glenn

ADDRESS 30350 Red Cardinal St. Denham Springs, LA 70726

desires to purchase the grave space described below, subject to Cemetery regulations.

N 1/2 NE 1/4 Lot No. 49 Section No. 34 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Burre
Supt. of City Cemeteries

Credit Card

By: Michael Arnold

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 12/11/ 2019

SOLD TO:

Mr.. Mrs. Miss Emanuel Earl Williams

ADDRESS 216 Mahmed Rd. New Augusta MS 39462

desires to purchase the grave space described below, subject to Cemetery regulations.

N 1/2 NW 1/4 Lot No. 38 Section No. 35 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Burre
Supt. of City Cemeteries

CASH

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

SOLD TO:

Hattiesburg, Miss., 12/12/ 20 19

Mr. Mrs. Miss Lillie M. Cooper

ADDRESS 423 NE Innis St. Petal, MS 39465

desires to purchase the grave space described below, subject to Cemetery regulations.

N $\frac{1}{2}$ NE $\frac{1}{4}$ Lot No. 33 Section No. 36 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

ck # 1058

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Borne
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

SOLD TO:

Hattiesburg, Miss., 12/12/ 20 19

Mr. Mrs. Miss Melvin Cooper, SR

ADDRESS 423 NE Innis St. Petal, MS 39465

desires to purchase the grave space described below, subject to Cemetery regulations.

S $\frac{1}{2}$ NE $\frac{1}{4}$ Lot No. 33 Section No. 36 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CK # 3660
(Legacy)

CITY OF HATTIESBURG, MISSISSIPPI

By Deborah Borne
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 12-16 2019

SOLD TO:

Mr. Mrs. Miss

ADDRESS

desires to purchase the grave space described below, subject to Cemetery regulations.

S 1/2 NW 1/4 Lot No. 22 Section No. 35 in Highland Cemetery

Number of grave spaces 1

Price per grave space \$ 175.00

Price Received \$

175.00

CITY OF HATTIESBURG, MISSISSIPPI

By

Supt. of City Cemeteries

CK # 8755

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 12-16 2019

SOLD TO:

Mr. Mrs. Miss

ADDRESS

desires to purchase the grave space described below, subject to Cemetery regulations.

N 1/2 SW 1/4 Lot No. 22 Section No. 35 in Highland Cemetery

Number of grave spaces 1

Price per grave space \$ 175.00

Price Received \$

175.00

CITY OF HATTIESBURG, MISSISSIPPI

By

Supt. of City Cemeteries

CK # 8755

CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES

Hattiesburg, Miss. 2-16 2019

SOLD TO:

Mr. Mrs. Miss Herman Barnes

ADDRESS 34104 Sir Charles Court Brandon, MS 39042

desires to purchase the grave space described below, subject to Cemetery regulations.

S $\frac{1}{2}$ SE $\frac{1}{4}$ Lot No. 87 Section No. 37 in Highland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

Credit card

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 12-18 2016

SOLD TO:

Mr. Mrs. Miss

Philip Catward

ADDRESS

805 Hardy St. Hattiesburg, Miss 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

1/2 NE 1/4 Lot No. 104 Section No. 38 in Hickland Cemetery

Number of grave spaces 2

Price per grave space \$ 175.00

Price Received \$

350.00

CITY OF HATTIESBURG, MISSISSIPPI

By

John A. Lee

Supt. of City Cemeteries

Cash

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
SOUTH HILL CEMETERY**

For and in consideration of the sum of ONE HUNDRED FIFTY AND NO/100 Dollars (\$150.00), 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 Melina Childs, 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 (E½) of the Northwest Quarter (NW¼)

Lot Number: 76 Section Number: 1

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as South Hill 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 7th day of January, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK
(S E A L)

MAYOR

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, 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.

Given under my hand and official seal of office on this, the 7th day of January, 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
SOUTH HILL CEMETERY**

For and in consideration of the sum of THREE HUNDRED AND NO/100 Dollars (\$300.00), 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 William LeRoy & Margaret Burger, 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 (SW¼)

Lot Number: 45

Section Number: 1

according to the Cemetery Survey of the City of Hattiesburg,
Mississippi known as South Hill Cemetery, and containing
Two (2) 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 7th day of January, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK
(S E A L)

MAYOR

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton 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.

Given under my hand and official seal of office on this, the 7th day of January, 2020.

My Commission Expires:

NOTARY PUBLIC

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 Frank J. Glenn, 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 (N½) of the Northeast Quarter (NE¼)

Lot 49 Section 34

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 7th day of January, 2020.

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, Toby Barker 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 7th day of January 2020.

My Commission Expires:

NOTARY PUBLIC

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 Emanuel Earl Williams, 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 (N½) of the Northwest Quarter (NW¼)

Lot 38 Section 35

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 7th day of January, 2020.

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, Toby Barker 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 7th day of January 2020.

My Commission Expires:

NOTARY PUBLIC

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 Lillie M. Cooper, 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 $\frac{1}{2}$) of the Northeast Quarter (NE $\frac{1}{4}$)

Lot 33 Section 36

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 7th day of January, 2020.

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, Toby Barker 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 7th day of January 2020.

My Commission Expires:

NOTARY PUBLIC

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 Melvin Cooper, SR., 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 (S½) of the Northeast Quarter (NE¼)

Lot 33

Section 36

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 7th day of January, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(SEAL)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker 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 7th day of January 2020.

My Commission Expires:

NOTARY PUBLIC

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 Herman Barnes, 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 (S½) of the Southeast Quarter (SE¼)

Lot 87 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 7th day of January, 2020.

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, Toby Barker 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 7th day of January 2020.

My Commission Expires:

NOTARY PUBLIC

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 Mary Ola Barber, 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 (S½) of the Northwest Quarter (NW¼)

Lot 22 Section 35

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 7th day of January, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(SEAL)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kernas 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 7th day of January 2020.

My Commission Expires:

NOTARY PUBLIC

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 John Edward Barber, Sr, 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 (N½) of the Southwest Quarter (SW¼)

Lot 22 Section 35

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 7th day of January, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(SEAL)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker 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 7th day of January 2020.

My Commission Expires:

NOTARY PUBLIC

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, Philip Gatwood, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

Northeast Quarter (NE¼)

Lot Number 104 Section Number 38

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 7th day January, 2020.

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, Toby Barker 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 7th day of January, 2020

My Commission Expires:

NOTARY PUBLIC



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Chris McGee, Director of Parks and Recreation

cc:

Date: Tuesday, January 7, 2020

Re: Approve the City's purchase of one (1) grave space located in the North Half (N 1/2) of the Southwest Quarter (SW 1/4), Lot 149, Section 25 at Highland Cemetery. Minute Book# 2010/2-359-361 in the amount of \$ 175.00, from Wyvetta Linder, authorize manual check for the same.
File Number: 2020-18
Minute Book #

Summary

Approve the City's purchase of one (1) grave space located in the North Half (N 1/2) of the Southwest Quarter (SW 1/4), Lot 149, Section 25 at Highland Cemetery. Minute Book# 2010-2/359-361 in the amount of \$ 175.00, from Wyvetta Linder, authorize manual check for the same.

Recommendation Statement

I am recommending approval of Requisition NO. 2019-434, Approve the City's purchase of one (1) grave space.

Please place this on the January 7, 2020 City Council meeting for consideration.

Date: 12-6-19

To whom it may concern:

I, Wyvetta Linder am requesting to sell back (1) grave space (s)

Located at Highland Cemetery, In Section 25, Lot 149, N 1/2 of the SW 1/4, to the

City of Hattiesburg, which was purchased on March 01, 2010 at the price

Of \$ 175.⁰⁰ per grave space. Total amount due this request \$ 175.⁰⁰

MB# 2010 Page 2-359-361

Sincerely,

Wyvetta C. Linder

Mail to:

Brenden Gardens
900 E. Southwind Rd, Apt 317
Springfield, IL 62703

Phone#

217-331-8019

Approved
Deborah Burre
12/16/19

FILE NO. 1113
ATTENTION: GRAVE SPACES

GRAVE SPACES

SPRING ST. 1113

Hattiesburg, Miss. 3-1-

SOLD TO:

Mr. Mrs.

ADDRESS

desires to purchase the grave space described below, subject to Cemetery regulations.

Lot No.

SW 1/4 Lot No. 149

Section No.

25

In

Hattiesburg, Miss. Cemetery

Number of grave spaces

1

Price per grave space \$

175.00

Price Received \$

175.00

check 2577

CITY OF HATTIESBURG, MISSISSIPPI

By

Sup. of City Cemetery

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss. 2-25- 2010

SOLD TO: Twilling, Montine Twillie and Markel
 Mr. Mrs. Miss
 ADDRESS 2410 McTaviss Loop Hattiesburg, MS 39402
 desires to purchase the grave space described below, subject to Cemetery regulations.
N $\frac{1}{2}$ SE $\frac{1}{4}$ Lot No. 35 Section No. 33 in Highland Cemetery
 Number of grave spaces 1 Price per grave space \$ 175.00
 Price Received \$ 175.00
check 1998
 CITY OF HATTIESBURG, MISSISSIPPI
 By William K. Hinton
 Sup. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss. 2-25- 2010

SOLD TO: Aleshia Ardine Twillie
 Mr. Mrs. Miss
 ADDRESS 2410 McTaviss Loop Hattiesburg, MS 39402
 desires to purchase the grave space described below, subject to Cemetery regulations.
S $\frac{1}{2}$ SE $\frac{1}{4}$ Lot No. 35 Section No. 33 in Highland Cemetery
 Number of grave spaces 1 Price per grave space \$ 175.00
 Price Received \$ 175.00
check 1998
 CITY OF HATTIESBURG, MISSISSIPPI
 By William K. Hinton
 Sup. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss. 3-1- 2010

SOLD TO: Visie Scott
 Mr. Mrs. Miss
 ADDRESS 221 Ruby Ave 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. 27 Section No. 31 in Highland Cemetery
 Number of grave spaces 1 Price per grave space \$ 125.00
 Price Received \$ 125.00
 CITY OF HATTIESBURG, MISSISSIPPI
 By William K. Hinton
 Sup. of City Cemeteries

mail to:

119 W Raylotts
 Spaulding, IL 62561

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss. 3-1- 2010

SOLD TO: Wuvetta Linder
 Mr. Mrs. Miss
 ADDRESS 805 Hardy St Hattiesburg MS 39401
 desires to purchase the grave space described below, subject to Cemetery regulations.
N $\frac{1}{2}$ SW $\frac{1}{4}$ Lot No. 149 Section No. 25 in Highland Cemetery
 Number of grave spaces 1 Price per grave space \$ 175.00
 Price Received \$ 175.00
check 2587
 CITY OF HATTIESBURG, MISSISSIPPI
 By William K. Hinton
 Sup. of City Cemeteries

mail to:

162 Cambridge
 Hattiesburg, MS 39402

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss. 3-2- 2010

SOLD TO: Terold A Kikendall
 Mr. Mrs. Miss
 ADDRESS 805 Hardy St Hattiesburg, MS 39401
 desires to purchase the grave space described below, subject to Cemetery regulations.
NE $\frac{1}{4}$ Lot No. 10 Section No. 33 in Highland Cemetery
 Number of grave spaces 2 Price per grave space \$ 175.00
 Price Received \$ 350.00
check 1653
 CITY OF HATTIESBURG, MISSISSIPPI
 By William K. Hinton
 Sup. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss. 3-4- 2010

SOLD TO: Derick Gohlar
 Mr. Mrs. Miss
 ADDRESS 1408 N Main 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. 26 Section No. 33 in Highland Cemetery
 Number of grave spaces 1 Price per grave space \$ 175.00
 Price Received \$ 175.00
cash
 CITY OF HATTIESBURG, MISSISSIPPI
 By William K. Hinton
 Sup. of City Cemeteries



Memorandum

To: Mayor Toby Barker and Members of City Council

From:

cc:

Date: Tuesday, January 7, 2020

Re: Approve claims docket for the period ending December 31, 2019.
File Number: 2020-22
Minute Book #

Summary

Recommendation Statement

Please place this on the January 7, 2020 City Council meeting for consideration.

CITY OF HATTIESBURG

DOCKET OF CLAIMS

PERIOD ENDING DECEMBER 31, 2019

Date

- 12/27/19

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
GENERAL FUND							
00001 A & R FARM AND GARDEN	310307	00195445	19001778	FENCE POLES W CAREY PARKWAY	12/31/19	274703	254.49-

A & R FARM AND GARDEN							254.49-
Sum							2,059.50-
00001 AAMCO TRANSMISSION (MAYF I110858		00195352	19001763	REPRS U#16769 POLICE	12/31/19	274704	2,059.50-

AAMCO TRANSMISSION (MAYF							2,059.50-
Sum							2,564.57-
00001 AAMCO TRANSMISSION (PINE I142216		00195113	19001762	REPRS U#16640 POLICE	12/31/19	274705	2,564.57-

AAMCO TRANSMISSION (PINE							2,564.57-
Sum							230.00-
00001 ADAMS, ZANE	TRAV ADVANCE	00195520	19001668	TRAV ADV MSFA 1001 CLASS	12/31/19	274708	230.00-

ADAMS, ZANE							230.00-
Sum							26.50-
00001 AIRGAS USA LLC (NORDAN S 9096078185		00194840	19001681	MAINT SUPP P/W SHOP	12/31/19	274709	26.50-

AIRGAS USA LLC (NORDAN S							26.50-
Sum							571.96-
00001 ALLBRITTON CHAIN SAW & L 67970		00195612	19001820	STIHL BLOWER TRAFFIC DEPT	12/31/19	274711	571.96-

ALLBRITTON CHAIN SAW & L							571.96-
Sum							344.00-
00001 ALLRED, MIRANDA	RESTITUTION	02020173	19001626	RESTITUTION PYMT	12/31/19	274713	344.00-

ALLRED, MIRANDA							344.00-
Sum							1,398.75-
00001 AMERICAN AIR SPECIALISTS 102132		00195395	19001853	CHILLER REPAIR CITY HALL	12/31/19	274714	1,398.75-

AMERICAN AIR SPECIALISTS							1,398.75-
Sum							165.00-
00001 ASSN OF STATE FLOODPLAIN 27394 LOWERY		00195634	19001735	2020 MBRSHIP DUES LOWERY	12/31/19	274716	165.00-
00001 ASSN OF STATE FLOODPLAIN REG WILLIAMS		00195580	19001801	REG CFM RETAKE WILLIAMS	12/31/19	274716	50.00-

ASSN OF STATE FLOODPLAIN							215.00-
Sum							

00001 AT&T	601M81832700	02020175	19001632	MNTHLY SERV 12/19 VARI DEPTS	12/31/19	274717	14,095.73-
00001 AT&T	601545491010	02020184	19001662	SRV 12/8-1/7/10 POL DISPATCH	12/31/19	274718	179.44-
00001 AT&T	601M26940440	00020203	19001686	SRVS 12/8/19-1/7/20 POLICE	12/31/19	274719	76.00-
00001 AT&T	601M26684200	00195704	19001802	INTERACT SUPPORT	12/31/19	274720	6,790.00-
00001 AT&T	601M26491400	00195704	19001803	INTERACT SUPPORT	12/31/19	274721	47.00-
00001 AT&T	056314932900	02020202	19001886	L/DIST 11/15-12/15/19 DISPATCH	12/31/19	274722	45.29-

AT&T							21,233.46-
Sum							21,233.46-
00001 AT&T MOBILITY	2872738/6150	00195424	19001608	GPS TRACKING 11/19 VARI DEPTS	12/31/19	274723	5,180.90-
00001 AT&T MOBILITY	287273578351	00195423	19001609	WIRELESS SRV 11/19 VARI DEPTS	12/31/19	274723	5,376.83-
00001 AT&T MOBILITY	287289913717	00195616	19001760	WIRELESS SERV 11/19 POLICE	12/31/19	274723	4,594.70-

AT&T MOBILITY							15,152.43-
Sum							15,152.43-
00001 AT&T MOBILITY (SEI PROCE	577694291	00195427	19001611	IPHONE FOR INFO TECH DEPT	12/31/19	274724	.99-
00001 AT&T MOBILITY (SEI PROCE	577750608	00195629	19001797	COUNCIL OFFICE IPADS	12/31/19	274724	6,294.00-

AT&T MOBILITY (SEI PROCE							6,294.99-
Sum							6,294.99-
00001 AUTO ARMATURE SERVICE IN	19503	00195405	19001653	BATTERIES U#16009 HEALTH DIV	12/31/19	274725	500.85-
00001 AUTO ARMATURE SERVICE IN	19601	00195479	19001775	BATTERY U#15480 CONSTR	12/31/19	274725	145.95-

AUTO ARMATURE SERVICE IN							646.80-
Sum							646.80-
00001 BARKER, THOMAS	TRAVEL REIMB	00195428	19001610	EXPNS LEG MEET WASHINGTON	12/31/19	274727	250.42-

BARKER, THOMAS							250.42-
Sum							250.42-
00001 BICE, ASHLEY	TRAV ADVANCE	00195760	19001892	TRAV ADV DRUG RECOGNITION CLS	12/31/19	274730	276.00-

BICE, ASHLEY							276.00-
Sum							276.00-
00001 BUTLER, SNOW, O'MARA, STEVE	10232307	00195419	19001614	REPORT FEE DISCLOSURE FY 2019	12/31/19	274735	3,000.00-

BUTLER, SNOW, O'MARA, STEVE							3,000.00-
Sum							3,000.00-
00001 C SPIRE (MEGAGATE)	1487138	00195413	19001612	NETWORK/INTERNET INFO TECH	12/31/19	274736	15,602.28-
00001 C SPIRE (MEGAGATE)	1490244	00195413	19001613	NETWORK/INTERNET INFO TECH	12/31/19	274736	1,308.49-

C SPIRE (MEGAGATE)							16,910.77-
Sum							16,910.77-
00001 CANON FINANCIAL SERVICES	20892755	00195640	19001734	COPIER 12/19 PURCHASING	12/31/19	274738	179.71-

CANON FINANCIAL SERVICES							179.71-
Sum							179.71-

00001	CARQUEST	AUTO	PARTS	STOR	14758-133168	00194867	19001636	REPR	PTS	U#19345	POLICE	12/31/19	274742	149.90-
00001	CARQUEST	AUTO	PARTS	STOR	14758-133169	00194867	19001637	REPR	PTS	U#14147	POLICE	12/31/19	274742	54.07-
00001	CARQUEST	AUTO	PARTS	STOR	14758-133170	00194867	19001638	REPR	PTS	U#18326	POLICE	12/31/19	274742	159.80-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134102	00195399	19001641	REPR	PTS	U#17017	PUBLIC WORKS	12/31/19	274742	172.24-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134122	00195406	19001642	REPR	PTS	U#17017	STREET	12/31/19	274742	138.41-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134123	00195406	19001643	REPR	PTS	U#20373	STREET	12/31/19	274742	81.24-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134082	00195378	19001646	REPR	PTS	VARI	SANIT UNITS	12/31/19	274742	246.97-
00001	CARQUEST	AUTO	PARTS	STOR	14758-133941	00195312	19001666	REPR	PTS	U#18205	POLICE STOCK	12/31/19	274742	979.51-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134208	00195472	19001674	NYE	BALL	DROP	EQUIPMENT	12/31/19	274742	274.00-
00001	CARQUEST	AUTO	PARTS	STOR	14758-133611	00195091	19001699	REPR	PTS	VARI	POLICE UNITS	12/31/19	274742	449.70-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134090	00195391	19001750	REPR	PTS	POLICE	STOCK	12/31/19	274742	122.32-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134089	00195391	19001751	REPR	PTS	U#16414	POLICE	12/31/19	274742	219.22-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134249	00195487	19001752	REPR	PTS	POLICE	STOCK	12/31/19	274742	57.99-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134250	00195487	19001753	REPR	PTS	POLICE	STOCK	12/31/19	274742	49.11-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134251	00195487	19001754	REPR	PTS	U#21130	POLICE	12/31/19	274742	243.44-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134252	00195487	19001755	REPR	PTS	U#16414	POLICE	12/31/19	274742	23.64-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134253	00195487	19001756	REPR	PTS	U#17569	POLICE	12/31/19	274742	109.22-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134413	00195611	19001773	ANTIFREEZE	P/W	SHOP		12/31/19	274742	835.92-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134269	00195503	19001774	WIRE	SUPP	P/W	SHOP	12/31/19	274742	71.06-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134236	00195477	19001792	REPR	PTS	U#17017	HEALTH	12/31/19	274742	32.28-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134201	00195458	19001794	W/SHIELD	WIPERS	VARI	CEM UNITS	12/31/19	274742	75.52-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134430	00195627	19001834	REPR	PTS	CEMETERY	TRUCK	12/31/19	274742	66.08-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134456	00195650	19001879	REPR	PTS	U#21357	CEMETERY	12/31/19	274742	111.13-
00001	CARQUEST	AUTO	PARTS	STOR	14758-133734	00195176	19001881	PARTS	WASH/SUPP	P/W	SHOP	12/31/19	274742	1,148.25-
00001	CARQUEST	AUTO	PARTS	STOR	14758-134584	00195176	19001882	CREDIT	RETURN			12/31/19	274742	1,148.25-

CARQUEST AUTO PARTS STOR

Sum														4,722.77-
00001	CENTER FOR GOVERNMENT AN	REG	FEE	COL	00195596	19001724	REG	COLE	ATHENIAN	DIALOGUE		12/31/19	274743	100.00-
00001	CENTER FOR GOVERNMENT AN	REG	FEE	JOLL	00195596	19001725	REG	JOLLY	ANTHENIAN	DIALOGUE		12/31/19	274744	100.00-

CENTER FOR GOVERNMENT AN

Sum														200.00-
00001	CERTIFIED LABORATORIES		3790760		00195515	19001859	OIL	FOR	POLICE	SERVICE	CNTR	12/31/19	274746	1,207.25-

CERTIFIED LABORATORIES

Sum														1,207.25-
00001	CINTAS CORPORATION	#J66	4037494317		00195494	19001675	UNIFORMS	12/16	PUBLIC	WORKS		12/31/19	274751	110.38-
00001	CINTAS CORPORATION	#J66	4037494226		00195494	19001676	UNIFORMS	12/16	PUBLIC	WORKS		12/31/19	274751	85.67-
00001	CINTAS CORPORATION	#J66	4037494419		00195494	19001677	UNIFORMS	12/16	PUBLIC	WORKS		12/31/19	274751	77.04-
00001	CINTAS CORPORATION	#J66	4037494463		00195494	19001678	UNIFORMS	12/16	PUBLIC	WORKS		12/31/19	274751	48.73-
00001	CINTAS CORPORATION	#J66	4037494277		00195494	19001679	UNIFORMS	12/16	PUBLIC	WORKS		12/31/19	274751	25.66-
00001	CINTAS CORPORATION	#J66	4037494485		00195494	19001680	UNIFORMS	12/16	PUBLIC	WORKS		12/31/19	274751	23.25-
00001	CINTAS CORPORATION	#J66	40367494489		00195491	19001682	UNIFORMS	12/16	SANIT			12/31/19	274751	139.97-
00001	CINTAS CORPORATION	#J66	4036908359		00195547	19001768	UNIFORMS	12/09	TRAFFIC			12/31/19	274751	32.27-
00001	CINTAS CORPORATION	#J66	4036908505		00195547	19001769	MOP/MAT	12/09	TRAFFIC			12/31/19	274751	7.90-
00001	CINTAS CORPORATION	#J66	4037494389		00195547	19001770	UNIFORMS	12/16	TRAFFIC			12/31/19	274751	32.27-
00001	CINTAS CORPORATION	#J66	4037494501		00195547	19001771	MOP/MAT	12/16	TRAFFIC			12/31/19	274751	7.90-
00001	CINTAS CORPORATION	#J66	4037494422		00195529	19001776	UNIFORMS	12/16	P/W	SHOP		12/31/19	274751	35.72-
00001	CINTAS CORPORATION	#J66	4037494259		00195529	19001777	UNIFORMS	12/16	CONSTR			12/31/19	274751	74.29-
00001	CINTAS CORPORATION	#J66	4038097584		00195695	19001837	UNIFORMS	12/23	PUBLIC	WORKS		12/31/19	274751	129.77-
00001	CINTAS CORPORATION	#J66	4038097695		00195695	19001838	UNIFORMS	12/23	PUBLIC	WORKS		12/31/19	274751	110.38-

00001	CINTAS CORPORATION #J66	4038097891	00195695	19001839	UNIFORMS 12/23	PUBLIC WORKS	12/31/19	274751	77.04-
00001	CINTAS CORPORATION #J66	4038097712	00195695	19001840	UNIFORMS 12/23	PUBLIC WORKS	12/31/19	274751	25.66-
00001	CINTAS CORPORATION #J66	4038097882	00195695	19001841	UNIFORMS 12/23	PUBLIC WORKS	12/31/19	274751	48.73-
00001	CINTAS CORPORATION #J66	4038097831	00195695	19001842	UNIFORMS 12/23	PUBLIC WORKS	12/31/19	274751	23.25-
00001	CINTAS CORPORATION #J66	4038097775	00195708	19001843	UNIFORMS 12/23	P/W SHOP	12/31/19	274751	35.72-
00001	CINTAS CORPORATION #J66	4038097653	00195708	19001844	UNIFORMS 12/23	CONSTR	12/31/19	274751	74.29-
00001	CINTAS CORPORATION #J66	4038097770	00195749	19001873	UNIFORMS 12/23	TRAFFIC	12/31/19	274751	32.27-
00001	CINTAS CORPORATION #J66	4038097954	00195749	19001874	MOP/MAT 12/23	TRAFFIC	12/31/19	274751	7.90-
00001	CINTAS CORPORATION #J66	0000015742	00195695	19001883	CREDIT		12/31/19	274751	90.06
00001	CINTAS CORPORATION #J66	0000015859	00195695	19001884	CREDIT		12/31/19	274751	113.07

CINTAS CORPORATION #J66									
Sum									
00001	CITY OF HATTIESBURG FUND TRF 2ND 12/1	02020186	19001690	TRF 2ND 12/19/19	PAYROLL		12/17/19	114094	1,062.93-
									1,183,925.93-

CITY OF HATTIESBURG FUND									
Sum									
00001	CITY OF HATTIESBURG FUND TRF 1% SPEC	02020187	19001687	TRF 1% SPEC SALES TAX HOTEL			12/17/19	114092	1,183,925.93-
00001	CITY OF HATTIESBURG FUND TRF 1% SPEC	02020185	19001688	TRF 1% SPEC SALES TAX RESTAUR			12/17/19	114093	34,545.23-
									197,194.75-

CITY OF HATTIESBURG FUND									
Sum									
00001	CLARK, BRANDON	TRAV ADVANCE	00195521	19001669	TRAV ADV MSFA 1001 CLASS		12/31/19	274752	231,739.98-
									230.00-

CLARK, BRANDON									
Sum									
00001	COCA COLA BOTTLING COMPA	198773203571	00195498	19001727	BOTTLED WATER M/ADM		12/31/19	274754	230.00-
									114.00-

COCA COLA BOTTLING COMPA									
Sum									
00001	COLE, RONDA	TRAVEL REIMB	00195595	19001717	PKING FEE NEW ORLEANS AIRPORT		12/31/19	274755	114.00-
00001	COLE, RONDA	TRAVEL ADVAN	00195626	19001718	TRV ADV MMCA CNF BAY ST LOUIS		12/31/19	274756	60.00-
00001	COLE, RONDA	TRAV ADV 4/2	00195603	19001719	TRV ADV SPR ATHENIAN DIALOGUE		12/31/19	274757	188.86-
									420.28-

COLE, RONDA									
Sum									
00001	COMCAST CABLEVISION OF H	839641073089	00195630	19001736	CABLE 11/15-12/4/19	CITY HALL	12/31/19	274758	669.14-
00001	COMCAST CABLEVISION OF H	839641073089	00195652	19001737	CABLE 12/15/19-1/14/20	C HALL	12/31/19	274759	580.88-
									322.32-

COMCAST CABLEVISION OF H									
Sum									
00001	COURTESY MOTORS INC	499462	00195583	19001821	REPR PTS U#17528	TRAFFIC	12/31/19	274763	903.20-
									189.82-

COURTESY MOTORS INC									
Sum									
00001	COW AND COOPS	PO#195559 12	00195559	19001779	FOOD KHB 12/19	MEETING	12/31/19	274764	189.82-
									99.00-

COW AND COOPS									
Sum									
00001	CRAIN TRACTOR & EQUIPMEN	CP74096	00194237	19001793	REPR PTS U#16723 & U#16722		12/31/19	274766	99.00-
									5,177.51-

CRAIN TRACTOR & EQUIPMEN									

Sum									5,177.51-
00001 DELTA FOREMOST CHEMICAL	154073	00195317	19001672	CLEANING SUPP FIRE MECH SHOP	12/31/19	274768		1,387.50-	

DELTA FOREMOST CHEMICAL									
Sum								1,387.50-	
00001 DISCOUNT SERVICES LLC (R PERMIT-MISC-	02020194	19001836	PERMIT-MISC-02-19-013171		12/31/19	274769		50.00-	

DISCOUNT SERVICES LLC (R									
Sum								50.00-	
00001 DOWNS, ADRIAN	TRAV ADVANCE	00195522	19001670	TRAV ADV MSFA 1001 CLASS	12/31/19	274772		230.00-	

DOWNS, ADRIAN									
Sum								230.00-	
00001 ECONOMY SUPPLY CO	025293	00195441	19001644	ORANGE FENCING W CAREY PKWAY	12/31/19	274774		182.45-	
00001 ECONOMY SUPPLY CO	025035	00195223	19001645	PAINT YTH ART MUSEUM TABLES	12/31/19	274774		35.70-	
00001 ECONOMY SUPPLY CO	025174	00195407	19001685	PLYWOOD FOR CEMETERIES	12/31/19	274774		184.00-	
00001 ECONOMY SUPPLY CO	025381	00195453	19001806	BLDG SUPP PINE ST GARAGE	12/31/19	274774		35.00-	
00001 ECONOMY SUPPLY CO	025544	00195524	19001825	LOCKS FOR P/W MECHANIC SHOP	12/31/19	274774		91.32-	
00001 ECONOMY SUPPLY CO	025380	00195476	19001827	BLDG SUPP YOUTH ART CENTER	12/31/19	274774		56.40-	
00001 ECONOMY SUPPLY CO	025644	00195619	19001833	LOCK FOR PUBLIC WORKS	12/31/19	274774		45.95-	
00001 ECONOMY SUPPLY CO	025807	00195748	19001897	GLUE STICKS CONSTR DEPT	12/31/19	274774		39.00-	

ECONOMY SUPPLY CO									
Sum								669.82-	
00001 ELKINS WHOLESALE INC	398537 & 398	00194534	19001673	JANIT SUPP FIRE DEPT	12/31/19	274775		654.55-	

ELKINS WHOLESALE INC									
Sum								654.55-	
00001 EMERGENCY MEDICAL PRODUC	2119871	00194955	19001639	AED PADS FIRE DEPT	12/31/19	274776		415.80-	

EMERGENCY MEDICAL PRODUC									
Sum								415.80-	
00001 EMPIRE TRUCK SALES (H'BU CE006159752:	00194985	19001832	REPR PTS U#20072 SANIT		12/31/19	274777		64.75-	

EMPIRE TRUCK SALES (H'BU									
Sum								64.75-	
00001 EQUIFAX INFORMATION SERV	5654508	00195632	19001757	ONLINE INVESTIGATION	12/31/19	274778		244.26-	

EQUIFAX INFORMATION SERV									
Sum								244.26-	
00001 EQUIPMENT INC	165502999	00195551	19001880	REPRS U#15856 CEMETERY	12/31/19	274779		694.56-	

EQUIPMENT INC									
Sum								694.56-	
00001 ESSCO HEATING AND A/C	37869	00194698	19001695	BOILER REPAIR CITY HALL	12/31/19	274780		248.00-	

ESSCO HEATING AND A/C									
Sum								248.00-	
00001 FAMILY DOLLAR (REFUND)	RESTITUTION-	02020178	19001629	RESTITUTION PYMT	12/31/19	274782		61.71-	

FAMILY DOLLAR (REFUND)									
Sum								61.71-	

00001 FERRARA FIRE APPARATUS I INV00000W007	00195170	19001815	EMER LIGHTS U#15064 FIRE DEPT	12/31/19	274784	815.70-

FERRARA FIRE APPARATUS I						
Sum						815.70-
00001 FIT-RX INSTALLATION AND	749	00194997	19001663 FITNESS EQUIPMENT	12/17/19	114091	3,370.00-

FIT-RX INSTALLATION AND						
Sum						3,370.00-
00001 FUELMAN OF MS	BG127044 NP5	00195588	19001738 FUEL RUSSELL 12/19 ATLANTA	12/31/19	274787	48.53-
00001 FUELMAN OF MS	BG127044 NP5	00195575	19001749 FUEL CHGS 12/9-15/19 POLICE	12/31/19	274787	170.72-
00001 FUELMAN OF MS	BG127044 NP5	00195589	19001765 FUEL CHG 12/9/19 MITCHELL	12/31/19	274787	27.43-

FUELMAN OF MS						
Sum						246.68-
00001 FV RECYCLING	2019-6007	00195400	19001647 RECYCLE FEES 12/19 SANIT	12/31/19	274788	97.25-
00001 FV RECYCLING	2019-6008	00195400	19001648 RECYCLE FEES 12/19 SANIT	12/31/19	274788	42.75-
00001 FV RECYCLING	2019-6064	00195400	19001649 RECYCLE FEES 12/19 SANIT	12/31/19	274788	31.50-
00001 FV RECYCLING	2019-6063	00195400	19001650 RECYCLE FEES 12/19 SANIT	12/31/19	274788	89.00-
00001 FV RECYCLING	2019-6062	00195400	19001651 RECYCLE FEES 12/19 SANIT	12/31/19	274788	28.00-
00001 FV RECYCLING	2019-6092	00195400	19001652 RECYCLE FEES 12/19 SANIT	12/31/19	274788	73.00-
00001 FV RECYCLING	2019-6118	00195620	19001787 RECYCLE FEES 12/19 SANIT	12/31/19	274788	68.50-
00001 FV RECYCLING	2019-6123	00195620	19001788 RECYCLE FEES 12/19 SANIT	12/31/19	274788	59.50-
00001 FV RECYCLING	2019-6124	00195620	19001789 RECYCLE FEES 12/19 SANIT	12/31/19	274788	67.25-
00001 FV RECYCLING	2019-6163	00195620	19001790 RECYCLE FEES 12/19 SANIT	12/31/19	274788	110.00-

FV RECYCLING						
Sum						666.75-
00001 GILLILANDS ELECTRONICS S	70745	00194440	19001701 INSTALL CAMERAS SERVICE CNTR	12/31/19	274790	1,650.00-
00001 GILLILANDS ELECTRONICS S	70769	00195350	19001711 DOOR ACCESS LOCK P/W MAIN OFC	12/31/19	274790	895.00-
00001 GILLILANDS ELECTRONICS S	70744	00195557	19001758 CABLING FOR METAL DETECTOR	12/31/19	274790	188.98-
00001 GILLILANDS ELECTRONICS S	70815	00195720	19001860 PHONE RENT POLICE DEPT	12/31/19	274790	884.99-

GILLILANDS ELECTRONICS S						
Sum						3,618.97-
00001 GLADDEN LAW OFFICE PLLC	INV#0237	00195635	19001741 SRVS PLAN/ZONE/CODE ISSUES	12/31/19	274791	1,050.00-

GLADDEN LAW OFFICE PLLC						
Sum						1,050.00-
00001 GRAHAM, JEREMY	RESTITUTION	02020172	19001624 RESTITUTION PYMT	12/31/19	274792	1,084.87-

GRAHAM, JEREMY						
Sum						1,084.87-
00001 GULF GUARANTY EMPLOYEE B	191220133101	00195679	19001819 INMATES MED BILLS 11/22-12/19	12/31/19	274797	6,048.88-

GULF GUARANTY EMPLOYEE B						
Sum						6,048.88-
00001 GULF STATES DISTRIBUTORS	1332227-IN	00195108	19001814 DUTY AMMUNITION P/F ACADEMY	12/31/19	274798	718.00-

GULF STATES DISTRIBUTORS						
Sum						718.00-

00001 H'BURG AMERICAN (SUBSCRI	HA8535405	12	00195636	19001726	SUBSCRIP PYMT M/ADM	12/31/19	274800	78.01-

H'BURG AMERICAN (SUBSCRI								78.01-
Sum								360.00-
00001 HAVARD PEST CONTROL INC	1550669		02020200	19001845	SENTRICON RNWL P/F ACADEMY	12/31/19	274804	360.00-

HAVARD PEST CONTROL INC								360.00-
Sum								560.00-
00001 HICKS LAW FIRM, LLC	9291		00195404	19001615	SRVS SALIBA/PIERCE VS CITY	12/31/19	274805	560.00-
00001 HICKS LAW FIRM, LLC	9300		00195404	19001616	SRVS CITY VS CHARLIE HOLT	12/31/19	274805	1,960.00-
00001 HICKS LAW FIRM, LLC	9292		00195404	19001617	SRVS PLAAS VS CITY	12/31/19	274805	660.00-

HICKS LAW FIRM, LLC								3,180.00-
Sum								47.22-
00001 HUB CITY SPOKES	INV65207		00195585	19001730	CITY WIDE ADS AND NOTICES	12/31/19	274806	47.22-
00001 HUB CITY SPOKES	INV95222		00195586	19001731	CITY WIDE ADS AND NOTICES	12/31/19	274806	177.36-
00001 HUB CITY SPOKES	INV95208		00195587	19001732	CITY WIDE ADS AND NOTICES	12/31/19	274806	15.48-
00001 HUB CITY SPOKES	95315		00195741	19001852	CITY WIDE ADS AND NOTICES	12/31/19	274806	237.60-

HUB CITY SPOKES								477.66-
Sum								230.00-
00001 HYATT, MARIO	TRAV ADVANCE		00195523	19001671	TRAV ADV MSFA 1001 CLASS	12/31/19	274807	230.00-

HYATT, MARIO								230.00-
Sum								46.99-
00001 INTERFACE SECURITY SYSTE	19597117		00195710	19001829	SECURITY 1/20 YTH ART MUSEUM	12/31/19	274808	46.99-

INTERFACE SECURITY SYSTE								46.99-
Sum								447.00-
00001 INTONE IMAGING, LLC	7177		00195190	19001810	TONER POLICE RECORDS DIV	12/31/19	274809	447.00-

INTONE IMAGING, LLC								447.00-
Sum								180.00-
00001 IRBY, STUART C CO	S011643390.0		00194638	19001655	ELEC SUPP TRAFFIC DEPT	12/31/19	274810	180.00-
00001 IRBY, STUART C CO	S011673392.0		00195041	19001656	CHRISTMAS LIGHTS POWER CORDS	12/31/19	274810	500.00-
00001 IRBY, STUART C CO	S011679524.0		00194497	19001661	CREDIT INV#S011634544.001	12/31/19	274810	79.97
00001 IRBY, STUART C CO	S011680042.0		00195138	19001697	EVIDENCE FENCE INSTALL MATLS	12/31/19	274810	39.58-
00001 IRBY, STUART C CO	S011686368.0		00195283	19001826	EXTENSION CORDS P/W SHOP	12/31/19	274810	43.95-
00001 IRBY, STUART C CO	S011676779.0		00195064	19001828	CHRISTMAS LIGHT FOR DOWNTOWN	12/31/19	274810	133.20-

IRBY, STUART C CO								816.76-
Sum								3,251.00-
00001 JOHNSON CONTROLS, INC	00073677932		00195721	19001876	ENERGY EFFICIENCY SERV AGRMNT	12/31/19	274813	3,251.00-
00001 JOHNSON CONTROLS, INC	1-8982102711		00195722	19001877	SERV CALL SHERRILL CNTR	12/31/19	274813	1,274.66-

JOHNSON CONTROLS, INC								4,525.66-
Sum								1,799.06-
00001 JONES & BARTLETT PUBLISH	4198757		00195394	19001867	FIRE APPARATUS DR/OPER BOOKS	12/31/19	274814	1,799.06-

JONES & BARTLETT PUBLISH								1,799.06-
Sum								1,799.06-

00001 KEITHCO PETROLEUM	128363	00195546 19001850 GAS/DIESEL P/W FUEL STATION	12/31/19	274815	10,052.40-

KEITHCO PETROLEUM					
Sum					10,052.40-
00001 KONE INC (MONTGOMERY KON	11579202140	00195667 19001807 REPRS CITY HALL ELEVATOR	12/31/19	274817	969.30-

KONE INC (MONTGOMERY KON					
Sum					969.30-
00001 KRONOS INCORPORATED	11535927	00195705 19001804 SOFTWARE INFO TECH	12/31/19	274818	9,451.52-

KRONOS INCORPORATED					
Sum					9,451.52-
00001 LADD APPRAISAL SERVICE,	INV#6618	00195576 19001742 APPRAISAL GREELY ST	12/31/19	274820	525.00-
00001 LADD APPRAISAL SERVICE,	INV#6619	00195576 19001743 APPRAISAL DEWEY/COIT ST	12/31/19	274820	525.00-

LADD APPRAISAL SERVICE,					
Sum					1,050.00-
00001 LARRY'S WRECKER SERVICE	6866	00195334 19001640 TOWING U#14681 LAND CODE	12/31/19	274822	65.00-
00001 LARRY'S WRECKER SERVICE	6826	00195493 19001667 TOWING U#20847 POLICE	12/31/19	274822	55.00-
00001 LARRY'S WRECKER SERVICE	6839	00195665 19001812 TOWING U#18330 POLICE	12/31/19	274822	55.00-
00001 LARRY'S WRECKER SERVICE	6843	00195735 19001863 TOWING U#19706 POLICE	12/31/19	274822	55.00-
00001 LARRY'S WRECKER SERVICE	6955 (A)	00195735 19001864 TOWING U#17896 POLICE	12/31/19	274822	55.00-
00001 LARRY'S WRECKER SERVICE	6955 (B)	00195735 19001865 TOWING U#19340 POLICE	12/31/19	274822	55.00-

LARRY'S WRECKER SERVICE					
Sum					340.00-
00001 LEXISNEXIS MATTHEW BENDE	15148084	00195732 19001851 MS CODE SUPPLEMENT M/ADM	12/31/19	274824	41.58-

LEXISNEXIS MATTHEW BENDE					
Sum					41.58-
00001 LUU, LISA	TRAVEL REIMB	00195544 19001720 TRAVEL REIMB TAXI SAN ANTONIO	12/31/19	274825	52.54-
00001 LUU, LISA	TRAVEL REIMB	00195601 19001721 TRAV REIMB MMCCA WRKSHP JKSON	12/31/19	274826	30.10-
00001 LUU, LISA	TRAV ADV 4/2	00195602 19001722 TRAV ADV SP ATHENIAN DIALOGUE	12/31/19	274827	420.28-
00001 LUU, LISA	TRAV ADV 3/2	00195625 19001723 TRAV ADV MMCCA BAY ST LOUIS	12/31/19	274828	188.86-

LUU, LISA					
Sum					691.78-
00001 M M C MATERIALS INC-H'BU	619373	00193061 19001705 CONCRETE VARI CITY LOC	12/31/19	274829	550.00-
00001 M M C MATERIALS INC-H'BU	621096	00193061 19001706 CONCRETE VARI CITY LOC	12/31/19	274829	550.00-
00001 M M C MATERIALS INC-H'BU	621574	00193061 19001707 CONCRETE VARI CITY LOC	12/31/19	274829	440.00-
00001 M M C MATERIALS INC-H'BU	624842	00193061 19001708 CONCRETE VARI CITY LOC	12/31/19	274829	660.00-
00001 M M C MATERIALS INC-H'BU	630137	00193061 19001709 CONCRETE VARI CITY LOC	12/31/19	274829	440.00-
00001 M M C MATERIALS INC-H'BU	630138	00193061 19001710 CONCRETE VARI CITY LOC	12/31/19	274829	660.00-

M M C MATERIALS INC-H'BU					
Sum					3,300.00-
00001 MAPLES GAS COMPANY	165496	00195701 19001888 DIESEL FOR P/W FUEL STATION	12/31/19	274830	6,247.51-

MAPLES GAS COMPANY					
Sum					6,247.51-

00001 MCCOY'S TRIM SHOP	104339	00193819 19001772 SEAT REPR U#16007 STREET	12/31/19	274833	200.00-

MCCOY'S TRIM SHOP					200.00-
Sum					200.00-
00001 MEDICAL ANALYSIS-GHV	10461	00195481 19001696 FEES 12/19 EMP MED CLINIC	12/31/19	274837	30,368.21-

MEDICAL ANALYSIS-GHV					30,368.21-
Sum					30,368.21-
00001 MID SOUTH UNIFORM & SUPP 599617		00194991 19001633 UNIFORM SHIRTS DANIELS POLICE	12/31/19	274838	98.25-
00001 MID SOUTH UNIFORM & SUPP 599616		00195140 19001634 BOOTS LT TAPP & SGT GRAY	12/31/19	274838	312.00-
00001 MID SOUTH UNIFORM & SUPP 599864		00195159 19001811 NAME TAG DANIEL POLICE DEPT	12/31/19	274838	17.00-

MID SOUTH UNIFORM & SUPP					427.25-
Sum					427.25-
00001 MILLS & SCANLON, P.A.	1292-0012M S	00195403 19001618 SRVS 2016 ANNEXATION	12/31/19	274839	13,988.55-

MILLS & SCANLON, P.A.					13,988.55-
Sum					13,988.55-
00001 MS MUNICIPAL ATTORNEYS A MMA02820		00195499 19001798 2020 MBRSHP DUES MORAN POPE	12/31/19	274843	25.00-

MS MUNICIPAL ATTORNEYS A					25.00-
Sum					25.00-
00001 MS MUSIC INC	1222796	00195683 19001809 SOUND SYS VETERANS DAY	12/31/19	274844	470.00-

MS MUSIC INC					470.00-
Sum					470.00-
00001 MS POWER COMPANY	12/19 GENERA	00020206 19001846 MNTHLY ELEC-GENERAL	12/31/19	274845	123,290.56-
00001 MS POWER COMPANY	13292-83419	00195723 19001875 ADDL ELEC VICKERS ESTATE	12/31/19	274845	1,593.30-

MS POWER COMPANY					124,883.86-
Sum					124,883.86-
00001 MS STATE DEVELOPMENT AUT R-103-205-02	02020196	19001716 HCL LEVERAGE LENDERS, LLC	12/20/19	114135	1,388,841.10-

MS STATE DEVELOPMENT AUT					1,388,841.10-
Sum					1,388,841.10-
00001 MSP ENTERPRISES, LLC	121319	00195676 19001816 LOT CLEARING/DEMO 12/19 LDC	12/31/19	274846	12,206.60-
00001 MSP ENTERPRISES, LLC	121919	00195677 19001817 DEMO 701 BOWLING ST LAND CODE	12/31/19	274846	6,732.75-
00001 MSP ENTERPRISES, LLC	121819	00195675 19001818 LOT CLEARING 201 S 23RD AVE	12/31/19	274846	1,816.04-

MSP ENTERPRISES, LLC					20,755.39-
Sum					20,755.39-
00001 NAPA AUTO PARTS	5930-605544	00195282 19001713 PUMP PUBLIC WORKS SHOP	12/31/19	274847	2,440.80-

NAPA AUTO PARTS					2,440.80-
Sum					2,440.80-
00001 NEEL-SCHAFFER INC	1061723	00195691 19001824 SRVS 10/19 MS4 PROGRAM MGMT	12/31/19	274848	4,583.33-

NEEL-SCHAFFER INC					4,583.33-
Sum					4,583.33-

00001 NEWELL PAPER COMPANY	4070804	00195240 19001654 JANIT SUPP P/F ACADEMY	12/31/19	274849	588.57-
00001 NEWELL PAPER COMPANY	4070076	00195001 19001856 JANIT SUPP POLICE DEPT	12/31/19	274849	2,349.39-
00001 NEWELL PAPER COMPANY	4071589	00195001 19001857 JANIT SUPP POLICE DEPT	12/31/19	274849	425.60-

NEWELL PAPER COMPANY					
Sum					3,363.56-
00001 NORFOLK SOUTHERN CORP	91300510	00195655 19001795 12/19 LEASE RR ST PK LOT	12/31/19	274850	2,026.42-

NORFOLK SOUTHERN CORP					
Sum					2,026.42-
00001 NORTHGATE LAND & TIMBER, 246		00195582 19001766 DIRT-DEMO PROPERTIES 11/19	12/31/19	274852	862.50-
00001 NORTHGATE LAND & TIMBER, 262		00195608 19001767 DIRT 1200 HALL AVE DEMO	12/31/19	274852	490.50-
00001 NORTHGATE LAND & TIMBER, 261		00195561 19001786 RED DIRT 1107 DEASON LDC	12/31/19	274852	81.00-

NORTHGATE LAND & TIMBER,					
Sum					1,434.00-
00001 OFFICE DEPOT INC	2358816661 &	00194718 19001691 OFFICE SUPP HUMAN RES	12/31/19	274854	193.87-
00001 OFFICE DEPOT INC	2366101442	00195384 19001870 PRINTER INK TRAFFIC DEPT	12/31/19	274854	97.66-
00001 OFFICE DEPOT INC	2366427229	00195426 19001871 PRINTER INK TRAFFIC DEPT	12/31/19	274854	80.39-

OFFICE DEPOT INC					
Sum					371.92-
00001 OFFICE PRODUCTS PLUS	886887-0	00195571 19001854 OFFICE SUPP/CALENDARS POLICE	12/31/19	274855	1,406.93-
00001 OFFICE PRODUCTS PLUS	886887-1	00195571 19001855 OFFICE SUPP/CALENDARS POLICE	12/31/19	274855	274.75-

OFFICE PRODUCTS PLUS					
Sum					1,681.68-
00001 OWENS BUSINESS MACHINES	389745	00195649 19001728 COPIER 1/20 M/ADM	12/31/19	274856	187.00-
00001 OWENS BUSINESS MACHINES	389744	00195649 19001729 COPIER 12/19 M/ADM	12/31/19	274856	128.25-
00001 OWENS BUSINESS MACHINES	388055	00194644 19001889 COPIER TONER RECORDS DIV	12/31/19	274856	426.44-

OWENS BUSINESS MACHINES					
Sum					741.69-
00001 PATTERSON AUTO ELECTRIC	80430	00195510 19001700 REPR PTS U#18321 POLICE	12/31/19	274861	141.33-
00001 PATTERSON AUTO ELECTRIC	80396	00195011 19001703 ENGINE REPR U#18321 POLICE	12/31/19	274861	2,164.10-
00001 PATTERSON AUTO ELECTRIC	80397	00195012 19001893 ENGINE REPR U#19706 POLICE	12/31/19	274861	2,164.10-

PATTERSON AUTO ELECTRIC					
Sum					4,469.53-
00001 PEARL RIVER VALLEY EPA (12/19 GENERA		00020206 19001847 MNTHLY 12/19 PUBLIC SERVICES	12/31/19	274863	1,293.57-

PEARL RIVER VALLEY EPA (					
Sum					1,293.57-
00001 PHILLIPS CAR CARE CENTER 03224		00195397 19001694 REPRS U#18548 URBAN DEV	12/31/19	274865	221.45-

PHILLIPS CAR CARE CENTER					
Sum					221.45-
00001 PINE BELT CDJR, INC (MCM 500190(A)		00190063 19001861 REPRS U#18321 POLICE	12/31/19	274867	3,097.36-
00001 PINE BELT CDJR, INC (MCM 500190(B)		00195181 19001862 ADDL AMT DUE PO#190063	12/31/19	274867	258.75-

PINE BELT CDJR, INC (MCM					
Sum					3,356.11-

00001 PINE BELT INDUSTRIAL SUP 4175997-01	00194178 19001858 BELTS FOR POLICE SERVICE CNTR	12/31/19	274868	26.44-

PINE BELT INDUSTRIAL SUP				
Sum				26.44-
00001 PINE BELT OIL COMPANY IN 1385021	00195409 19001620 GAS CARDS U#21387/21388 SANIT	12/31/19	274869	447.75-
00001 PINE BELT OIL COMPANY IN 10721828	00195700 19001887 GAS FOR P/W FUEL STATION	12/31/19	274869	6,941.18-

PINE BELT OIL COMPANY IN				
Sum				7,388.93-
00001 PINE BELT REGIONAL SOLID 100006 11/19	00195495 19001683 RUBBISH DISPOSAL 11/19 SANIT	12/31/19	274871	32,491.78-

PINE BELT REGIONAL SOLID				
Sum				32,491.78-
00001 PITNEY BOWES INC-METER R 331014141793	00195654 19001748 MAIL MACH LEASE 10/19-12/19	12/31/19	274873	1,206.87-

PITNEY BOWES INC-METER R				
Sum				1,206.87-
00001 POPE & POPE, PA 19054	00195543 19001744 SRVS CITY V SAIA MOTOR FRT	12/31/19	274875	5,801.57-
00001 POPE & POPE, PA 19053	00195543 19001745 SVRS CIVIL SRV COMM S RUSSELL	12/31/19	274875	5,025.00-

POPE & POPE, PA				
Sum				10,826.57-
00001 PRECISION DELTA CORP 15774	00195114 19001704 TRAINING AMMUNITION P/F ACDMY	12/31/19	274876	1,309.28-

PRECISION DELTA CORP				
Sum				1,309.28-
00001 RICOH CORP 32828303	00195711 19001800 COPIER 12/15-1/14/20 HUMAN RE	12/31/19	274879	221.67-

RICOH CORP				
Sum				221.67-
00001 RJ YOUNG COMPANY INV3415367	00195558 19001733 COPIER 11/5-12/4 CITY CLERK	12/31/19	274880	222.68-
00001 RJ YOUNG COMPANY INV3384978	00195590 19001739 GIS PLOTTER 10/17-11/16/19	12/31/19	274880	138.04-
00001 RJ YOUNG COMPANY INV3422472	00195617 19001791 COPIER 11/10-12/9 P/F ACDMY	12/31/19	274880	198.00-
00001 RJ YOUNG COMPANY INV3440634	00195745 19001869 COPIER 11/28-12/27 FIRE ADM	12/31/19	274880	194.00-

RJ YOUNG COMPANY				
Sum				752.72-
00001 ROGERS, KEVIN PO#195418 12	00195418 19001619 TITLE OPINIONS (4) LAND CODE	12/31/19	274882	1,000.00-
00001 ROGERS, KEVIN TITLE OPINIO	00195573 19001746 TITLE OPINIONS DEWEY/SCOTT ST	12/31/19	274882	500.00-

ROGERS, KEVIN				
Sum				1,500.00-
00001 SACKS OUTDOOR SUPPLY RC1000119914	00195468 19001813 UNIFORM SHIRTS CAPT FONTAINE	12/31/19	274885	164.97-

SACKS OUTDOOR SUPPLY				
Sum				164.97-
00001 SCOTTS HYDRAULIC SERVICE 39606	00195370 19001658 REPR PTS U#20071 SANIT	12/31/19	274887	867.74-
00001 SCOTTS HYDRAULIC SERVICE 39627	00195398 19001660 REPRS U#19755 SANIT	12/31/19	274887	1,300.05-

SCOTTS HYDRAULIC SERVICE				
Sum				2,167.79-

00001 SOUTHERN PINE ELECTRIC P 12/19 GENERA 00020205 19001848 MNTHLY 12/19 PUBLIC SERVICES	12/31/19	274892	1,441.61-

SOUTHERN PINE ELECTRIC P			
Sum			1,441.61-
00001 SOUTHERN TIRE MART LLC (2520024008 00195606 19001896 TIRES U#15064 FIRE DEPT	12/31/19	274894	1,188.90-

SOUTHERN TIRE MART LLC (			
Sum			1,188.90-
00001 SPARKMAN, KEITHA RESTITUTION 02020171 19001623 RESTITUTION PYMT	12/31/19	274895	200.00-

SPARKMAN, KEITHA			
Sum			200.00-
00001 SPEEDY PRINTING & SIGNS 27358 00195141 19001657 KHB NO LITTERING SIGNS SANIT	12/31/19	274897	500.00-
00001 SPEEDY PRINTING & SIGNS 27405 00195592 19001872 STREET MARKERS TRAFFIC DEPT	12/31/19	274897	288.00-

SPEEDY PRINTING & SIGNS			
Sum			788.00-
00001 SPIRE ENERGY 12/19 GENERA 00020206 19001849 MNTHLY GAS-GENERAL	12/31/19	274898	4,661.62-

SPIRE ENERGY			
Sum			4,661.62-
00001 SPRADLING, EMILY (REFUND RESTITUTION- 02020177 19001628 RESTITUTION PYMT	12/31/19	274899	78.48-

SPRADLING, EMILY (REFUND			
Sum			78.48-
00001 STANDARD OFFICE SUPPLY C 08818 00195382 19001799 EMPLOYEE HANDBOOKS HUMAN RES	12/31/19	274900	527.00-
00001 STANDARD OFFICE SUPPLY C 084735 00194629 19001830 OFFICE SUPP SANIT/RECYCLE OFC	12/31/19	274900	46.47-
00001 STANDARD OFFICE SUPPLY C 08746 00194629 19001831 OFFICE SUPP SANIT/RECYCLE OFC	12/31/19	274900	248.94-

STANDARD OFFICE SUPPLY C			
Sum			822.41-
00001 STAPLES 3433853029 00195415 19001692 OFFICE SUPP URBAN DEV/PLANN	12/31/19	274901	38.48-
00001 STAPLES 3433853030 00195415 19001693 OFFICE SUPP URBAN DEV/PLANN	12/31/19	274901	12.99-
00001 STAPLES 3434118969 00195562 19001764 OFFICE SUPP LAND CODE	12/31/19	274901	155.77-

STAPLES			
Sum			207.24-
00001 STREETKING CUSTOM WHEELS RESTITUTION- 02020180 19001631 RESTITUTION PYMT	12/31/19	274902	55.62-

STREETKING CUSTOM WHEELS			
Sum			55.62-
00001 STRIBLING EQUIPMENT CO L CS006105137: 00194904 19001823 REPR PTS U#17898 STREET	12/31/19	274903	135.12-

STRIBLING EQUIPMENT CO L			
Sum			135.12-
00001 SUBWAY RESTAURANT (REFUN RESTITUTION- 02020179 19001630 RESTITUTION PYMT	12/31/19	274904	54.44-

SUBWAY RESTAURANT (REFUN			
Sum			54.44-

00001 TRUCKPRO LLC	039-0673936	00195329 19001659 REPR PTS U#20071 SANIT	12/31/19	274906	486.86-
00001 TRUCKPRO LLC	039-067403	00195457 19001715 BRAKE REPR U#20069 SANIT	12/31/19	274906	1,192.56-

TRUCKPRO LLC					
Sum					1,679.42-
00001 TWIN FORKS RISING CDC	195540	00195540 19001689 ADV NEW YEARS DAY JAZZ BRUNCH	12/17/19	114095	600.00-

TWIN FORKS RISING CDC					
Sum					600.00-
00001 TYLER TECHNOLOGIES INC	025-280432	00182839 19001796 ENERGОВ UPGRADE URBAN DEV	12/31/19	274907	2,493.75-

TYLER TECHNOLOGIES INC					
Sum					2,493.75-
00001 ULTIMATE PARTY #3 (WAS 330370		00194823 19001714 FLOAT/PARADE MATLS/SUPP	12/31/19	274908	206.74-

ULTIMATE PARTY #3 (WAS					
Sum					206.74-
00001 UNDERWOOD OUTDOOR POWER, 81123		00195323 19001835 AGRI EQUIP MIXING OIL CMTERY	12/31/19	274909	178.56-

UNDERWOOD OUTDOOR POWER,					
Sum					178.56-
00001 UNDERWOOD, BRIAN (REFUND RESTITUTION-	02020176	19001627 RESTITUTION PYMT	12/31/19	274910	16.66-

UNDERWOOD, BRIAN (REFUND					
Sum					16.66-
00001 UNITED PARCEL SERVICE IN 0008E1Y15499		00195484 19001702 LATE FEE 11/9/19 POLICE	12/31/19	274911	2.18-
00001 UNITED PARCEL SERVICE IN 0008E1Y5509		00195651 19001761 SHIP FEES 11/16/19 POLICE	12/31/19	274911	1.35-

UNITED PARCEL SERVICE IN					
Sum					3.53-
00001 UNIVERSITY OF MISSISSIPP CL0732 POPE		00195525 19001665 REG POPE ED SMNAR 1/16/19	12/31/19	274912	200.00-

UNIVERSITY OF MISSISSIPP					
Sum					200.00-
00001 UNIVERSITY TIRE & SERVIC 555287		00194870 19001890 TIRES VARI POLICE UNITS	12/31/19	274913	6,672.84-
00001 UNIVERSITY TIRE & SERVIC 556590		00195549 19001891 TIRES POLICE STOCK	12/31/19	274913	3,623.40-
00001 UNIVERSITY TIRE & SERVIC 555326		00194945 19001894 ALIGNMENT U#19708 POLICE	12/31/19	274913	79.99-
00001 UNIVERSITY TIRE & SERVIC 556553		00195351 19001895 ALIGNMENT U#16769 POLICE	12/31/19	274913	79.99-

UNIVERSITY TIRE & SERVIC					
Sum					10,456.22-
00001 W GEOTECHNICAL AND TESTI 4029		00195724 19001878 MATERIAL TESTS P/SAFETY CMPLX	12/31/19	274917	3,087.50-

W GEOTECHNICAL AND TESTI					
Sum					3,087.50-
00001 WAL-MART STORES INC 005656		00194837 19001866 OFFICE SUPP P/F ACADEMY	12/31/19	274918	116.93-
00001 WAL-MART STORES INC 001822		00194813 19001868 PHOTO/CERTIF FRAMES FIRE DEPT	12/31/19	274918	90.89-

WAL-MART STORES INC					
Sum					207.82-

00001 WASTE MANAGEMENT OF SOUT 0011877-2526 00195496 19001684 RUBBISH DISPOSAL 11/19 SANIT	12/31/19	274922	1,319.56-

WASTE MANAGEMENT OF SOUT			
Sum			1,319.56-
00001 WATCH GUARD VIDEO ADVREP176313 00195215 19001698 VISTA REPR/BATTERIES POLICE	12/31/19	274923	2,700.00-

WATCH GUARD VIDEO			
Sum			2,700.00-
00001 WATERS INTERNATIONAL TRU 08P882494 00195175 19001621 REPR PTS U#14406 SANIT	12/31/19	274925	1,093.18-
00001 WATERS INTERNATIONAL TRU 821015 00195456 19001622 REPRS U#14406 SANIT	12/31/19	274925	622.44-
00001 WATERS INTERNATIONAL TRU 08P882126 00194962 19001822 REPR PTS PUBLIC WORKS UNIT	12/31/19	274925	335.00-

WATERS INTERNATIONAL TRU			
Sum			2,050.62-
00001 WHEELER'S JANITORIAL SUP 0404989 00195014 19001805 JANIT SUPP CITY HALL	12/31/19	274926	186.00-
00001 WHEELER'S JANITORIAL SUP 0405048 00195023 19001808 JANIT SUPP TRAIN DEPOT	12/31/19	274926	901.60-

WHEELER'S JANITORIAL SUP			
Sum			1,087.60-
00001 WILSON, DECAVIOUS RESTITUTION 02020173 19001625 RESTITUTION PYMT	12/31/19	274928	1,119.99-

WILSON, DECAVIOUS			
Sum			1,119.99-
00001 WORKWELL SERVICES (NEW V 49421 00195537 19001747 POST ACCIDENT DRUG SCREENS	12/31/19	274930	166.00-

WORKWELL SERVICES (NEW V			
Sum			166.00-
00001 ZAC FAIRLEY APPRAISALS, INVOICE # 10 00195577 19001740 APPRAISALS VARIOUS LOCATIONS	12/31/19	274931	1,100.00-

ZAC FAIRLEY APPRAISALS,			
Sum			1,100.00-
00001 98 WASTE LLC 2410 00195528 19001780 RUBBISH DISP 12/2-6 SANIT	12/31/19	274933	21,420.00-
00001 98 WASTE LLC 2412 00195528 19001781 RUBBISH DISP 12/2/19 PUB WRKS	12/31/19	274933	161.00-
00001 98 WASTE LLC 2413 00195528 19001782 RUBBISH DISP 12/2-16 PKS/REC	12/31/19	274933	1,050.00-
00001 98 WASTE LLC 2370 00195555 19001783 RUBBISH DISPOSAL LAND CODE	12/31/19	274933	17,164.00-
00001 98 WASTE LLC 2411 00195644 19001784 RUBISH DISPOSAL LAND CODE	12/31/19	274933	7,686.00-

98 WASTE LLC			
Sum			47,481.00-

Sum			3,318,085.76-

Date - 12/27/19

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
PARKS & RECREATION FUND							
00002 AT&T MOBILITY	287273578351	00195423	19000444	WIRELESS SRV 11/19 REC ADM	12/31/19	274723	407.71-
AT&T MOBILITY							
Sum							407.71-
00002 B S N SPORTS	907410180	00195210	19000460	REC SUPP TATUM BASEBALL	12/31/19	274726	77.89-
00002 B S N SPORTS	907479264	00195305	19000461	REC SUPP TATUM TENNIS	12/31/19	274726	167.04-
B S N SPORTS							
Sum							244.93-
00002 BRACKMAN MOWER WAREHOUSE	50466	00195360	19000456	REPRS U#17998 MOWER	12/31/19	274733	138.00-
00002 BRACKMAN MOWER WAREHOUSE	50468	00195357	19000457	REPRS U#21097 MOWER	12/31/19	274733	60.00-
00002 BRACKMAN MOWER WAREHOUSE	50467	00195359	19000458	REPRS U#20744 MOWER	12/31/19	274733	80.00-
BRACKMAN MOWER WAREHOUSE							
Sum							278.00-
00002 CARQUEST AUTO PARTS STOR	14758-134290	00195538	19000463	REPR PTS U#13130 TRUCK	12/31/19	274742	84.13-
00002 CARQUEST AUTO PARTS STOR	14758-134483	00195658	19000471	WD-40 SUPP GRNDS MAINT	12/31/19	274742	75.12-
00002 CARQUEST AUTO PARTS STOR	14758-134510	00195663	19000483	REPR PTS U#11214 TRUCK	12/31/19	274742	141.48-
CARQUEST AUTO PARTS STOR							
Sum							300.73-
00002 CITY OF HATTIESBURG FUND	TRF 2ND 12/1	02020186	19000454	TRF 2ND 12/19/19 PAYROLL	12/17/19	312592	66,734.03-
CITY OF HATTIESBURG FUND							
Sum							66,734.03-
00002 CLEMTS HARDWARE	124476	00195385	19000451	D/T BAG LIGHTING EQUIP	12/31/19	274753	17.97-
00002 CLEMTS HARDWARE	124512	00195563	19000472	SHOVELS GRNDS MAINT	12/31/19	274753	47.98-
CLEMTS HARDWARE							
Sum							65.95-
00002 COMSOUTH	193762	00195356	19000452	RADIO REPR U#16112 GRNDS MNT	12/31/19	274761	200.95-
00002 COMSOUTH	194012	00195300	19000464	RADIO BATTERIES GRNDS MAINT	12/31/19	274761	396.00-
00002 COMSOUTH	194081	00195300	19000465	RADIO BATTERIES GRNDS MAINT	12/31/19	274761	198.00-
00002 COMSOUTH	193999	00195455	19000466	RADIO REPR GRNDS MAINT	12/31/19	274761	230.70-
COMSOUTH							
Sum							1,025.65-
00002 ECONOMY SUPPLY CO	024374	00194909	19000462	BLDG MATLS KP PLAYGRNDS	12/31/19	274774	601.60-
00002 ECONOMY SUPPLY CO	025477	00195450	19000473	BLDG MATLS DAHMER PARK	12/31/19	274774	184.90-
00002 ECONOMY SUPPLY CO	025534	00195637	19000474	BLDG MATLS DAHMER PARK	12/31/19	274774	140.85-
ECONOMY SUPPLY CO							
Sum							927.35-

00002 ELKINS WHOLESALE INC	395897	00193607 19000448	JANIT SUPP GRNDS MAINT	12/31/19	274775	1,508.90-
00002 ELKINS WHOLESALE INC	395897-1	00193607 19000449	JANIT SUPP GRNDS MAINT	12/31/19	274775	92.71-
00002 ELKINS WHOLESALE INC	402113 00 00	00195623 19000470	TRASH BAGS GRNDS MAINT	12/31/19	274775	202.10-

ELKINS WHOLESALE INC						
Sum						1,803.71-
00002 GREEN FOREST NURSERY INC	33176	00195213 19000450	RPLCMNT TREE WALNUT STREET	12/31/19	274794	95.00-

GREEN FOREST NURSERY INC						
Sum						95.00-
00002 GUTHRIE, JONI S	PKS/REC PROG 02020199	19000485	SERVICES LINE DANCING	12/31/19	274799	120.00-

GUTHRIE, JONI S						
Sum						120.00-
00002 LANCASTER'S MACHINE & WE	24278	00195451 19000459	REPRS U#18474 SPREADER	12/31/19	274821	50.00-

LANCASTER'S MACHINE & WE						
Sum						50.00-
00002 MARTIN, MAGDALINE	PKS/REC PROG 02020199	19000488	SERVICES JEWELRY CLASS	12/31/19	274831	24.00-

MARTIN, MAGDALINE						
Sum						24.00-
00002 MCGEE, CHRIS	TRAVEL REIMB 00195497	19000468	GAS EXPNS 11/26 SLIDELL, LA	12/31/19	274835	20.00-

MCGEE, CHRIS						
Sum						20.00-
00002 MS POWER COMPANY	12/19 PKS/RE 00020206	19000481	MNTHLY ELEC-PARKS & REC	12/31/19	274845	16,034.30-

MS POWER COMPANY						
Sum						16,034.30-
00002 OFFICE DEPOT INC	2363340209	00195122 19000453	FOLDERS YTH BSKTBALL COACHES	12/31/19	274854	47.52-

OFFICE DEPOT INC						
Sum						47.52-
00002 PEANUTS TOWING SERVICE	92274	00195673 19000475	TOWING U#8937 TRUCK	12/31/19	274862	75.00-
00002 PEANUTS TOWING SERVICE	92501	00195702 19000476	TOWING U#11961 TRUCK	12/31/19	274862	100.00-

PEANUTS TOWING SERVICE						
Sum						175.00-
00002 PINE BELT PORTABLE TOILE	00001000D200	00195145 19000477	PORTALETs/HANDWASH TOWN SQ PK	12/31/19	274870	1,130.00-
00002 PINE BELT PORTABLE TOILE	00001000D199	00195668 19000478	ADDL AMT DUE PO#194408	12/31/19	274870	180.00-
00002 PINE BELT PORTABLE TOILE	00001000D200	00195670 19000479	ADDL AMT DUE PO#195145	12/31/19	274870	360.00-
00002 PINE BELT PORTABLE TOILE	00001000D199	00194408 19000484	PORTALETs/HAND WASH TSP 11/19	12/31/19	274870	1,130.00-

PINE BELT PORTABLE TOILE						
Sum						2,800.00-
00002 PINE BELT TROPHY	PO#193633 10	00193633 19000480	TROPHIES PK/REC FUN DAY	12/31/19	274872	30.00-

PINE BELT TROPHY						
Sum						30.00-

00002 SHABAZZ, AMATULLAH	PKS/REC PROG 02020199 19000487 SERVICES CRAFTS	12/31/19	274889	24.00-

SHABAZZ, AMATULLAH				
Sum				24.00-
00002 SOUTHERN MS PINE STRAW	12207 00195389 19000455 PINE STRAW GRNDS MAINT	12/31/19	274890	137.50-

SOUTHERN MS PINE STRAW				
Sum				137.50-
00002 SPEEDY PRINTING & SIGNS	27402 00195530 19000467 DOOR LABEL U#9167 TRUCK	12/31/19	274897	48.00-

SPEEDY PRINTING & SIGNS				
Sum				48.00-
00002 SPIRE ENERGY	12/19 PKS/RE 00020206 19000482 MNTHLY GAS-PARKS & REC	12/31/19	274898	407.46-

SPIRE ENERGY				
Sum				407.46-
00002 USA BOXING-SOUTHERN ASSN	PO#195059 AD 00195641 19000469 ADDL BOXING FEES	12/31/19	274914	105.00-

USA BOXING-SOUTHERN ASSN				
Sum				105.00-
00002 WALCK, SUSAN A	PKS/REC PROG 02020199 19000486 SERVICES POTTERY CLASS	12/31/19	274919	80.00-

WALCK, SUSAN A				
Sum				80.00-
00002 WATER FLOW PRODUCTIONS I	11216 00195454 19000445 REPR SPRINKLERS TOWN SQ PARK	12/31/19	274924	316.60-
00002 WATER FLOW PRODUCTIONS I	11217 00195454 19000446 REPR SPRINKLERS CITY HALL	12/31/19	274924	1,241.60-
00002 WATER FLOW PRODUCTIONS I	11218 00195454 19000447 REPR LEAKS DAHMER PARK	12/31/19	274924	205.50-

WATER FLOW PRODUCTIONS I				
Sum				1,763.70-

Sum				93,749.54-

DOCKET OF CLAIMS

Date - 12/27/19

PERIOD ENDING DECEMBER 31, 2019

Vendor

Invoice
Number

Purchase Order

Claims
Number

Item	Description
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Check
Date

Check
No.

Check
Amount

HATT.MUNICIPAL FIRE PROTECTION

00005	TRUSTMARK NATIONAL BANK/	#27335025	NO	02020201	19000008	FIRE TRK LEASE NOTE#	22568	12/26/19	22255	16,377.37-
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00005	TRUSTMARK NATIONAL BANK/	27335025	NOT	02020204	19000009	FIRE TRUCK LEASE NOTE #40263	12/27/19	22256	5,836.57-
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TRUSTMARK NATIONAL BANK/

Sum

22,213.94-

Sum

22,213.94-

00009 CITY OF HATTIESBURG FUND TRF 2ND 12/1 02020186 19000415 TRF 2ND 12/19/19 PAYROLL	12/17/19	22254	111,758.91-

CITY OF HATTIESBURG FUND			
Sum			111,758.91-
00009 CONSOLIDATED PIPE & SPLY 0498417-000- 00195231 19000412 HAND TOOLS SEWER DEPT	12/31/19	274762	179.95-
00009 CONSOLIDATED PIPE & SPLY 0498503-000- 00195332 19000440 RAKES FOR SEWER CREWS	12/31/19	274762	126.00-

CONSOLIDATED PIPE & SPLY			
Sum			305.95-
00009 DIXIE COMMUNITY UTILITY SEWER BILLIN 00195482 19000419 SEWER BILLING 12/19	12/31/19	274770	414.00-

DIXIE COMMUNITY UTILITY			
Sum			414.00-
00009 FAIRLEY, BILLY RAY 240454 00195622 19000433 BRICK WORK 28TH AVE JOB SITE	12/31/19	274781	350.00-

FAIRLEY, BILLY RAY			
Sum			350.00-
00009 GILLILANDS ELECTRONICS S 70902 00195743 19000466 PHONE SYS RENT WTR PLANT	12/31/19	274790	148.16-

GILLILANDS ELECTRONICS S			
Sum			148.16-
00009 HACH COMPANY 11765639 00195516 19000465 TEST SUPP WTR PLT #2 LAB	12/31/19	274801	1,889.80-

HACH COMPANY			
Sum			1,889.80-
00009 JOHNNY'S WRECKER SERVICE 39093 00195615 19000434 TOWING U#18897 SEWER	12/31/19	274812	300.00-

JOHNNY'S WRECKER SERVICE			
Sum			300.00-
00009 L & A CONTRACTING CO 483-149 00195713 19000447 AERATOR MNT 12/2-15 LAGOONS	12/31/19	274819	34,765.00-

L & A CONTRACTING CO			
Sum			34,765.00-
00009 MCELHANEY PLUMBING INC 282618 00195509 19000442 WHEELBARROWS SEWER DEPT	12/31/19	274834	129.90-

MCELHANEY PLUMBING INC			
Sum			129.90-
00009 MILLS & SCANLON, P.A. 1292-001M ST 00195402 19000409 SRVS REVIEW SEWER CONTRACTS	12/31/19	274839	1,344.00-

MILLS & SCANLON, P.A.			
Sum			1,344.00-
00009 MORGAN, C J INC 2019113 00195552 19000422 FIRE HYDRANTS KAMPER PARK	12/31/19	274842	30,623.51-
00009 MORGAN, C J INC 2019126 00195552 19000423 INSTALL METERS MIDTOWN	12/31/19	274842	12,965.50-
00009 MORGAN, C J INC 2019132 00195552 19000424 WATER BILLING 10/14-12/15/19	12/31/19	274842	192,756.15-
00009 MORGAN, C J INC 2019131 00195552 19000425 WESLEY PLANT WORK	12/31/19	274842	6,774.91-
00009 MORGAN, C J INC 2019129 00195552 19000426 WTR PLANT #1 WORK	12/31/19	274842	22,323.69-
00009 MORGAN, C J INC 2019130 00195552 19000427 WATER PLANT #2 WORK	12/31/19	274842	36,040.35-

MORGAN, C J INC			
Sum			301,484.11-

00009 MS POWER COMPANY	12/19 W&SO&M	00020206	19000460	MNTHLY ELEC-W&SO&M	12/31/19	274845	81,327.39-

MS POWER COMPANY							81,327.39-
Sum							143.00-
00009 NORTH LAMAR WATER ASSN	SEWER BILLIN	00195480	19000420	SEWER BILLING 12/19	12/31/19	274851	143.00-

NORTH LAMAR WATER ASSN							143.00-
Sum							478.80-
00009 PARISH TRACTOR (HATTIESB	02-105398	00193996	19000473	REPRS U#20682 EXCAVATOR SEWER	12/31/19	274859	478.80-

PARISH TRACTOR (HATTIESB							478.80-
Sum							337.06-
00009 PEARL RIVER VALLEY EPA (	12/19 W&SO&M	00020206	19000461	MNTHLY 12/19 PUBLIC SERVICES	12/31/19	274863	337.06-

PEARL RIVER VALLEY EPA (							337.06-
Sum							162.50-
00009 PETRO AUTOMOTIVE GROUP	6172497/1	00195647	19000436	PROGRAM KEY U#19356 WTR BILNG	12/31/19	274864	162.50-

PETRO AUTOMOTIVE GROUP							162.50-
Sum							1,069.73-
00009 POLLARD WATER.COM-EAST	0151607	00193919	19000416	METER LOCKS/SUPP WTR BILLING	12/31/19	274874	1,069.73-
00009 POLLARD WATER.COM-EAST	0151743	00193919	19000417	METER LOCKS/SUPP WTR BILLING	12/31/19	274874	2,348.15-
00009 POLLARD WATER.COM-EAST	0151744	00193919	19000418	SAFETY GLASSES/CLOTHING	12/31/19	274874	151.07-

POLLARD WATER.COM-EAST							3,568.95-
Sum							2,850.00-
00009 RJM MCQUEEN CONTRACTING	2013	00195712	19000453	SWR REPR RICHBURG/DOGWOOD	12/31/19	274881	2,850.00-
00009 RJM MCQUEEN CONTRACTING	2014	00195712	19000454	SWR REPR MANDALAY/HILLENDAL	12/31/19	274881	4,862.50-
00009 RJM MCQUEEN CONTRACTING	2015	00195712	19000455	SWR REPR MCINNIS/S 28TH	12/31/19	274881	6,860.00-
00009 RJM MCQUEEN CONTRACTING	2016	00195712	19000456	SWR REPR S 28TH/MCINNIS	12/31/19	274881	7,499.40-
00009 RJM MCQUEEN CONTRACTING	2017	00195712	19000457	SWR REPR WARWICK/WELLINGTON	12/31/19	274881	10,518.50-
00009 RJM MCQUEEN CONTRACTING	2018	00195712	19000458	SWR REPR VENETIAN WAY/W 4TH	12/31/19	274881	14,777.00-
00009 RJM MCQUEEN CONTRACTING	2019	00195712	19000459	SWR REPR RONIE ST/ELIZABETH	12/31/19	274881	7,410.00-

RJM MCQUEEN CONTRACTING							54,777.40-
Sum							875.24-
00009 SANSOM EQUIPMENT CO	60726	00195396	19000443	REPR PTS U#18897 SEWER	12/31/19	274886	875.24-

SANSOM EQUIPMENT CO							875.24-
Sum							1,645.06-
00009 SOUTHERN PINE ELECTRIC P	12/19 W&SO&M	00020205	19000462	MNTHLY 12/19 PUBLIC SERVICES	12/31/19	274892	1,645.06-

SOUTHERN PINE ELECTRIC P							1,645.06-
Sum							1,290.00-
00009 SOUTHERN PIPE & SUPPLY C	3713531-00	00195225	19000437	CHOP SAW BLADES TRANS DEPT	12/31/19	274893	1,290.00-
00009 SOUTHERN PIPE & SUPPLY C	3715702-00	00195232	19000441	VARI SHOVELS FOR SEWER CREWS	12/31/19	274893	101.25-

SOUTHERN PIPE & SUPPLY C							1,391.25-
Sum							

00009 SOUTHERN TIRE MART LLC (2520023839	00195553 19000474 TIRE U#18706 WTR BILLING	12/31/19	274894	115.34-

SOUTHERN TIRE MART LLC (				
Sum				115.34-
00009 SPARTAN TOOL, LLC	625422 00194561 19000435 TRAILER MOUNTED HYDRO-JETTER	12/31/19	274896	48,070.00-

SPARTAN TOOL, LLC				
Sum				48,070.00-
00009 SPIRE ENERGY	12/19 W&SO&M 00020206 19000463 MNTHLY GAS-W&SO&M	12/31/19	274898	629.75-

SPIRE ENERGY				
Sum				629.75-
00009 UNIVERSITY TIRE & SERVIC 554968	00194716 19000470 ALIGNMENT U#15667 TRANS	12/31/19	274913	89.95-
00009 UNIVERSITY TIRE & SERVIC 555835	00195031 19000471 TIRES U#18945 TRANS	12/31/19	274913	786.00-
00009 UNIVERSITY TIRE & SERVIC 555950	00195212 19000472 ADDL AMT DUE PO#195031 TRANS	12/31/19	274913	75.00-

UNIVERSITY TIRE & SERVIC				
Sum				950.95-
00009 VACUUM TRUCK SALES & SER MS16550(A)	00195421 19000467 REPR PTS U#18897 SEWER	12/31/19	274915	786.10-
00009 VACUUM TRUCK SALES & SER MS16550(B)	00195738 19000468 ADDL AMT DUE PO#195421	12/31/19	274915	226.58-

VACUUM TRUCK SALES & SER				
Sum				1,012.68-
00009 WALT MASSEY CHEVROLET	PO#194713 11 00194713 19000475 REPRS U#20446 TRANS	12/31/19	274921	1,223.49-

WALT MASSEY CHEVROLET				
Sum				1,223.49-

Sum				667,666.24-

Date - 12/27/19

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
WATER & SEWER FUND							
00011 ACORD, NIKKI	METER DEP RF	02020169	19000199	METER DEP RFD	12/31/19	274706	20.96-
ACORD, NIKKI							
Sum							20.96-
00011 ADAMS, KATHLEEN E	METER DEP RF	02020190	19000172	METER DEP RFD	12/31/19	274707	75.00-
ADAMS, KATHLEEN E							
Sum							75.00-
00011 BARRETT, KELSEY	METER DEP RF	02020169	19000192	METER DEP RFD	12/31/19	274728	13.36-
BARRETT, KELSEY							
Sum							13.36-
00011 BIRD, MATTHEW	METER DEP RF	02020169	19000181	METER DEP RFD	12/31/19	274731	20.96-
BIRD, MATTHEW							
Sum							20.96-
00011 BLACKWELL, SHANE DW	METER DEP RF	02020169	19000183	METER DEP RFD	12/31/19	274732	20.96-
BLACKWELL, SHANE DW							
Sum							20.96-
00011 BUTLER, RACHELLE	METER DEP RF	02020169	19000178	METER DEP RFD	12/31/19	274734	17.96-
BUTLER, RACHELLE							
Sum							17.96-
00011 CANIZARO, JAMES	METER DEP RF	02020169	19000194	METER DEP RFD	12/31/19	274737	20.96-
CANIZARO, JAMES							
Sum							20.96-
00011 CARDONA, JESSIE	METER DEP RF	02020169	19000197	METER DEP RFD	12/31/19	274739	20.96-
CARDONA, JESSIE							
Sum							20.96-
00011 CHAMBERS, DOROTHY	METER DEP RF	02020190	19000169	METER DEP RFD	12/31/19	274747	6.00-
CHAMBERS, DOROTHY							
Sum							6.00-
00011 CRAFT BROTHERS INVEST	METER DEP RF	02020169	19000180	METER DEP RFD	12/31/19	274765	75.00-
CRAFT BROTHERS INVEST							
Sum							75.00-
00011 DAWN INVESTMENTS, LLC	METER DEP RF	02020169	19000196	METER DEP RFD	12/31/19	274767	20.96-
DAWN INVESTMENTS, LLC							
Sum							20.96-

00011 DIXON, JERRY L	METER DEP RF 02020169 19000201 METER DEP RFD	12/31/19	274771	20.96-

DIXON, JERRY L				20.96-
Sum				20.96-
00011 DREHI 1805	METER DEP RF 02020169 19000186 METER DEP RFD	12/31/19	274773	20.96-

DREHI 1805				20.96-
Sum				20.96-
00011 FLADAGER, BRENDA	METER DEP RF 02020190 19000173 METER DEP RFD	12/31/19	274785	20.96-

FLADAGER, BRENDA				20.96-
Sum				20.96-
00011 GRAY, RALPH JR	METER DEP RF 02020190 19000170 METER DEP RFD	12/31/19	274793	20.96-

GRAY, RALPH JR				20.96-
Sum				20.96-
00011 GREEN, KASHUNDA	METER DEP RD 02020190 19000174 METER DEP RFD	12/31/19	274795	20.96-

GREEN, KASHUNDA				20.96-
Sum				20.96-
00011 HALLMAN PROPERTY MGMT ME	METER DEP RF 02020169 19000202 METER DEP RFD	12/31/19	274802	20.96-

HALLMAN PROPERTY MGMT ME				20.96-
Sum				20.96-
00011 HANCOCK WHITNEY BANK	34957 02020189 19000168 MDB 2013 MDBHATT1213	12/17/19	312594	2,800.00-

HANCOCK WHITNEY BANK				2,800.00-
Sum				75.00-
00011 JAMES, LOUIS	METER DEP RF 02020169 19000185 METER DEP RFD	12/31/19	274811	75.00-

JAMES, LOUIS				75.00-
Sum				20.96-
00011 KING, THOMAS E 209 SOUTH	METER DEP RF 02020169 19000198 METER DEP RFD	12/31/19	274816	20.96-

KING, THOMAS E 209 SOUTH				20.96-
Sum				75.00-
00011 LEE,ALEXIS	METER DEP RF 02020169 19000204 METER DEP RFD	12/31/19	274823	75.00-

LEE,ALEXIS				75.00-
Sum				67.40-
00011 MARTIN, WILLIAM	METER DEP RF 02020169 19000179 METER DEP RFD	12/31/19	274832	67.40-

MARTIN, WILLIAM				67.40-
Sum				20.96-
00011 MCMILLIAN, JAMES	METER DEP RF 02020169 19000188 METER DEP RFD	12/31/19	274836	20.96-

MCMILLIAN, JAMES				20.96-
Sum				20.96-

00011 MOLAIISON, MALEIGHA	METER DEP RF 02020169 19000193 METER DEP RFD	12/31/19	274841	20.96-

MOLAIISON, MALEIGHA				20.96-
Sum				75.00-
00011 OAKWOOD LLC 114	METER DEP RF 02020169 19000191 METER DEP RFD	12/31/19	274853	75.00-

OAKWOOD LLC 114				75.00-
Sum				13.36-
00011 PAGE, KENDRIA	METER DEP RF 02020190 19000175 METER DEP RFD	12/31/19	274857	13.36-

PAGE, KENDRIA				13.36-
Sum				75.00-
00011 PALLADIUM HOSPICE LLC	METER DEP RF 02020169 19000190 METER DEP RFD	12/31/19	274858	75.00-

PALLADIUM HOSPICE LLC				75.00-
Sum				39.92-
00011 PARKER, LISA M	WTR OVRPMT R 02020181 19000176 WTR OVRPMT RFD	12/31/19	274860	39.92-

PARKER, LISA M				39.92-
Sum				75.00-
00011 QUINTANA, ANGELA	METER DEP RF 02020169 19000182 METER DEP RFD	12/31/19	274877	75.00-

QUINTANA, ANGELA				75.00-
Sum				20.96-
00011 REGIONS MORTGAGE 1	METER DEP RF 02020169 19000200 METER DEP RFD	12/31/19	274878	20.96-

REGIONS MORTGAGE 1				20.96-
Sum				22.72-
00011 ROUNDSAVILLE, CAROL	METER DEP RF 02020169 19000177 METER DEP RFD	12/31/19	274883	22.72-

ROUNDSAVILLE, CAROL				22.72-
Sum				2.20-
00011 ROYAL, JUSTIN	METER DEP RF 02020169 19000184 METER DEP RFD	12/31/19	274884	2.20-

ROYAL, JUSTIN				2.20-
Sum				.92-
00011 SEGARI, PATRICK 1	METER DEP RF 02020190 19000171 METER DEP RFD	12/31/19	274888	.92-

SEGARI, PATRICK 1				.92-
Sum				17.96-
00011 WALDROP, SHARON	METER DEP RF 02020169 19000189 METER DEP RFD	12/31/19	274920	17.96-

WALDROP, SHARON				17.96-
Sum				17.44-
00011 WILLAIAMS, RICHARD	METER DEP RF 02020169 19000187 METER DEP RFD	12/31/19	274927	17.44-

WILLAIAMS, RICHARD				17.44-
Sum				75.00-
00011 WILSON, MEGAN	METER DEP RF 02020169 19000203 METER DEP RFD	12/31/19	274929	75.00-

WILSON, MEGAN				75.00-
Sum				75.00-

00011 ZALAZNIK, ELLOIT	METER DEP RF 02020169 19000195 METER DEP RFD	12/31/19	274932	18.96-

ZALAZNIK, ELLOIT				18.96-
Sum				-----
Sum				3,973.56-

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POLICE FORFEITURES FUND

00019 BEST EXPRESSION

024260

00194465

19000019

ITEMS FOR G.R.E.A.T.

12/31/19

274729

3,695.08-

BEST EXPRESSION

Sum

00019 TOSHIBA BUSINESS SOLUTIO 5077527

00195734

1900001'

COPIER 12/19 COMM RELATIONS

12/31/19

274905

3,695.08-

301.94-

TOSHIBA BUSINESS SOLUTIONS

Sum

00019 WAL-MART STORES INC

002925

00194759

19000018

BIKES G.R.E.A.T. GRADUATION

12/31/19

274918

301.94-

744.00-

WAL-MART STORES INC

Sum

744.00-

4,741.02-

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TAX COLLECTOR'S FUND

00027 H'BURG PUBLIC SCHOOLS

12/19 MILLAG 02020203 19000024 12/19 MILLAGE

12/27/19

312598

95,467.79-

00027 H'BURG PUBLIC SCHOOLS

12/19 MILLAG 02020203 19000025 12/19 MILLAGE

12/27/19

312599

12,648.83-

H'BURG PUBLIC SCHOOLS

Sum

108,116.62-

Sum

108,116.62-

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AIRPORT IMPROVEMENT FUND

00039	ARE	CONSULTANTS	INC	180711A	00195728	19000018	SRVS	AIRPT	APRON	RESTORATION	12/31/19	274715	76,132.88-
00039	ARE	CONSULTANTS	INC	180711B	00195729	19000019	SRVS	AIRPT	APRON	RESTORATION	12/31/19	274715	36,350.76-
00039	ARE	CONSULTANTS	INC	180712A	00195730	19000020	SRVS	AIRPT	APRON	RESTORATION	12/31/19	274715	26,831.92-
00039	ARE	CONSULTANTS	INC	191204A	00195731	19000021	SRVS	AIRPT	APRON	RESTORATION	12/31/19	274715	7,672.57-

ARE CONSULTANTS INC

Sum									146,988.13-
00039 FORD ENGINEERING SERVICE 190507N		00195727 19000022 SRVS RUNWAY 13 DRNGE IMPRVMT		12/31/19	274786				10,233.85-

FORD ENGINEERING SERVICE

Sum	10,233.85-
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Sum	157,221.98-
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Date - 12/27/19

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Amount

MUNICIPAL ROAD & BRIDGE

00072	NEEL-SCHAFFER	INC	1061703	00195685	19000032	SRVS	10/19	SAENGER ALLEY IMPV	12/31/19	274848	1,412.56-
00072	NEEL-SCHAFFER	INC	1061704	00195686	19000033	SRVS	10/19	GORDON CRK UNDRPAS	12/31/19	274848	3,802.42-
00072	NEEL-SCHAFFER	INC	1061708	00195687	19000034	SRVS	10/19	HARDY/GREEN ST	12/31/19	274848	12,611.28-
00072	NEEL-SCHAFFER	INC	1061709	00195688	19000035	SRV	10/19	38TH AVE STSCAPE	12/31/19	274848	1,500.00-
00072	NEEL-SCHAFFER	INC	1061714	00195690	19000036	SRVS	10/19	MDA-EDH GRANT APPL	12/31/19	274848	1,321.12-
00072	NEEL-SCHAFFER	INC	1061712	00195689	19000037	SRVS	10/19	38TH AVE SIDEWALK	12/31/19	274848	8,977.14-

NEEL-SCHAFFER INC

Sum	29,624.52-
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Sum	29,624.52-
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00073 MS POWER COMPANY	12/19 M TRAN	00020206	19000146	MNTHLY ELEC-MASS TRANSIT	12/31/19	274845	1,711.76-

MS POWER COMPANY							1,711.76-
Sum							871.70-
00073 NEEL-SCHAFFER INC	1061707	00195693	19000145	SRVS 10/19 CITY BUS STOPS	12/31/19	274848	871.70-

NEEL-SCHAFFER INC							871.70-
Sum							1,963.28-
00073 UNIVERSITY TIRE & SERVIC	556536	00195502	19000147	TIRES VARI BUSES	12/31/19	274913	58.00-
00073 UNIVERSITY TIRE & SERVIC	556557	00195502	19000148	TIRE DISPOSAL/SHOP SUPPLIES	12/31/19	274913	-----
							2,021.28-
UNIVERSITY TIRE & SERVIC							142.55-
Sum							-----
00073 VERIZON WIRELESS	9843885297	00195694	19000141	PARATRANSIT GPS 12/11-1/10/20	12/31/19	274916	142.55-

VERIZON WIRELESS							142.55-
Sum							349.68-
00073 WATERS INTERNATIONAL TRU	08S820339	00193440	19000142	REPRS U#18572	12/31/19	274925	1,095.15-
00073 WATERS INTERNATIONAL TRU	08S820815	00194806	19000143	REPRS U#18571	12/31/19	274925	339.22-
00073 WATERS INTERNATIONAL TRU	08S820883	00195058	19000144	REPRS U#18572	12/31/19	274925	-----
							1,784.05-
WATERS INTERNATIONAL TRU							-----
Sum							62,186.35-
Sum							

CITY OF HATTIESBURG

DOCKET OF CLAIMS

Date - 12/27/19

PERIOD ENDING DECEMBER 31, 2019

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WATER&SEWER CONSTRUCTION FUND							
00075 SOUTHERN MS PLANNING & D	11857	00195684	19000029	SRVS LAMAR BLVD GRANT ADM	12/31/19	274891	537.18-

SOUTHERN MS PLANNING & D							537.18-
Sum							-----
Sum							537.18-

Date - 12/27/19

Sum

PERIOD ENDING DECEMBER 31, 2019

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SPEC SALES TAX-P&R/UNIV IMPROV

00086 USM (1% SALES TAX)

RESTAURANT/H 02020188 19000023 RESTAURANT/HOTEL TAX 11/19

12/17/19

71093

115,870.00-

USM (1% SALES TAX)

Sum

115,870.00-

Sum

115,870.00-

Date - 12/27/19

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SPECIAL SALES TAX-T&A

00107 H'BURG CONVENTION COMMIS F00D/BEVERAG 02020183 19000005 F00D/BEVERAGE TAX 11/19

12/17/19

114098

454,453.39-

H'BURG CONVENTION COMMIS

Sum

00107 H'BURG TOURISM COMMISSIO MOTEL SALES 02020182 19000006 MOTEL SALES TAX 11/19

12/17/19

114099

454,453.39-

64,128.72-

H'BURG TOURISM COMMISSIO

Sum

64,128.72-

Sum

518,582.11-

Grand Total Level

Sum

5,935,458.12-