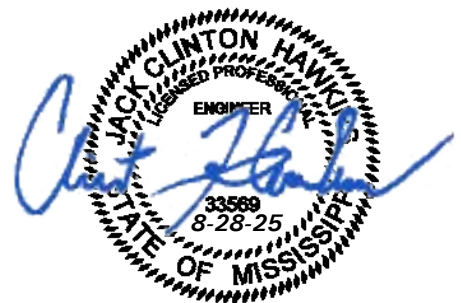




**SPECIFICATIONS
AND
CONTRACT DOCUMENTS
FOR
TUPELO WONDURA RUBBISH SITE EXPANSION 2025
FOR
CITY OF TUPELO
LEE COUNTY, MISSISSIPPI**



**BID NO 2025-028PW
CCE 3-10217**

AUGUST 2025

**SPECIFICATIONS
AND
CONTRACT DOCUMENTS
FOR
TUPELO WONDURA RUBBISH SITE EXPANSION 2025
FOR
CITY OF TUPELO
LEE COUNTY, MISSISSIPPI**

**CITY OF TUPELO
Mayor Todd Jordan**

Alder(wo)men:

**Janet Gaston
Lynn Bryan
Travis Beard
Nettie Davis
Chad Mims
Rosie Jones
Bentley Nolan**

**Ben Logan, City Attorney
Kim Hanna, Chief Financial Officer
Don Lewis, Chief Operating Officer
Chris Lewis, Superintendent of Water & Sewer
Dennis Bonds, City Engineer
Kelly Knight, Public Works Director**

**COOK COGGIN ENGINEERS, INC.
703 Crossover Road
Tupelo Mississippi 38801**

ASSEMBLY OF SPECIFICATIONS AND CONTRACT DOCUMENTS
TUPELO WONDURA RUBBISH SITE EXPANSION 2025
CITY OF TUPELO
LEE COUNTY, MISSISSIPPI

CONTRACTS:

00 11 13	Advertisement for Bids
00 21 13	Instructions for Bidders
00 41 43	Bid Form
00 43 13	Bid Bond
00 51 00	Notice of Award
00 52 13	Contract Agreement
00 55 00	Notice to Proceed
00 61 13.13	Performance Bond
00 61 13.16	Payment Bond
00 62 00	Owners Attorney
00 71 99	Certificate of Liability Insurance (Sample Form)
00 72 00	General Conditions
00 72 02	Mandatory Addendum to Tupelo Contracts
00 73 01	Supplemental General Conditions

SPECIFICATIONS:

01 25 21	Weather Delays
01 57 13.3	Temporary Silt Fence
01 71 15	Mobilization
26 20 01	Electrical Work
31 23 07	Site Earthwork
31 25 08	Erosion Control
31 32 19.17	Geotextile Fabric RW Stabilization
32 12 16.3	Size III Stabilizer Aggregate Course
33 05 61.1	Manholes
33 42 13	Pipe Culverts & Storm Sewers



ADVERTISEMENT FOR BIDS

Separate and sealed bids or electronic bids for the construction of **TUPELO WONDURA RUBBISH SITE EXPANSION, BID NO. 2025-028PW** will be received by the **CITY OF TUPELO** until **10:00 A.M. on TUESDAY THE 16TH DAY OF SEPTEMBER, 2025** and then at said office publicly opened and read aloud. Sealed bids will be received until the designated date and time at **TUPELO CITY HALL, TAX OFFICE, ATTENTION: KIM HANNA, 71 EAST TROY STREET, TUPELO, MS 38804**. Electronic bids will be received until the date and time via electronic online submission through www.cceplanroom.com.

This project consists of constructing a 3-acre expansion cell at the Tupelo Rubbish Landfill, including all earthwork, grassing and access road construction.

The Contract Documents may be examined at the following locations: **TUPELO CITY HALL, 71 EAST TROY STREET, TUPELO, MS 38804**, and Cook Coggin Engineers, Inc., 703 Crossover Road, Tupelo, Mississippi 38801.

Registering for a free account at www.cceplanroom.com will enable bidders to view and/or order Contract Documents online. The only requirement for account registration is a valid email address. Questions regarding website registration or online orders shall be directed to Plan House Printing at (662) 407-0193.

Contract Documents are issued to potential Bidders from Plan House Printing and Graphics, 607 West Main Street, Tupelo, MS 38804. Bidders may opt to purchase Contract Documents online at www.cceplanroom.com. All payments for Bid Documents are non-refundable and shall be made payable to Plan House Printing and Graphics, 607 West Main Street, Tupelo, MS 38804.

Bids will be accepted only under the name of the Bidder to whom contract documents have been issued by Plan House Printing, on behalf of the Engineer, and whose name appears on the official list of Plan holders maintained by Plan House Printing.

Each bidder must deposit with this bid, security in the amount, form and subject to the conditions provided in the Information for Bidders.

No Bidder may withdraw his bid within 60 days after the actual date of the opening thereof.

Simultaneously with his delivery of the executed contract, the Contractor shall furnish surety bonds subject to the conditions provided in the Information for Bidders.

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 this Bid.

A conditional or qualified Bid will not be accepted. Award will be made to the lowest or best responsible, responsive Bidder.

The Owner reserves the right to waive any informality or to reject any or all Bids.

CITY OF TUPELO
MAYOR TODD JORDAN

Publish: August 14, 21, 2025

INSTRUCTIONS FOR BIDDERS

Bids will be received by the Owner at the time and place designated in the Advertisement for Bids, and then at said office publicly opened and read aloud.

BIDDING

As a condition precedent to the opening of a Bid, Bids, when submitted as a paper version shall be sealed in a plain envelope with the following listed information plainly written on the outside or face of the envelope.

- (1) Addressee: Name of the Owner
- (2) For: Name of the project and contract designation for which the Bid is submitted.
- (3) Bid of: Name of Person or Firm submitting the Bid.
- (4) Permanent Address of the Bidder: Post Office Box Number, or Street Address, and the City and State of the Bidder.
- (5) Certification: Certificate of Responsibility Number as issued by the Mississippi State Board of Public Contractors or a statement signifying the Bid is not in excess of \$50,000.00.

PAPER BIDS

If a Bid is delivered by mail or commercial courier, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed as above.

ELECTRONIC BIDS

Electronic bidding ONLY applies when the ADVERTISEMENT FOR BIDS indicates Electronic Bidding,

As a condition precedent to the opening of a Bid, Bids submitted electronically shall meet the same functional and documentary requirements (Bid Form, Bid Bond, documents, certifications, attachments, etc.) as above for Bids submitted in paper form. Unless provided for otherwise, Bids submitted electronically shall be scanned images of completely executed bid documents delivered to the Owner in Portable Document Format (PDF). Bids may be submitted electronically either as an assembly in a single bookmarked PDF file or as an ordered series of multiple PDF files. The first page of the PDF assembly, or the first PDF file in an ordered series of multiple file Bids, shall display the same information that is required to be written on the outside or face of the envelope for Bids submitted in paper form. Bids submitted electronically that are corrupt or have corrupted attachments will not be considered.

ALL BIDS (PAPER OR ELECTRONIC)

The Bidder's contract designation as issued by the Mississippi State Board of Contractors must coincide with the type of project he is bidding.

Bids will be accepted only under the name of the Bidder to whom contract documents have been issued by the plan house designated on the advertisement for bids, on behalf of the Engineer, and whose name appears on the official list of Planholders maintained by the Owner.

No Bid will be opened, considered or accepted unless the above information is given as specified. Sufficient evidence that said Certificate of Responsibility has been issued and is in effect at the time receiving Bids must be submitted when required by the Owner.

All Bids must be made on the required Bid Form with all Addenda acknowledged. All blank spaces for Bid prices must be filled in, in ink or typewritten, and the Bid Form must be fully completed and executed when submitted. Only one copy of the Bid Form is required.

When a non-resident contractor submits a Bid for a Mississippi public project, he shall submit with the Bid a copy of his resident State's current law pertaining to such State's treatment of non-resident contractors as required by House Bill Number 850, Chapter Number 527, Laws of 1988. Bidders residing in the states having no contractor preference law shall so state in a letter on contractor's letterhead submitted with his Bid.

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.

Each Bidder is responsible for inspecting the site and 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 this Bid. Bidders must satisfy themselves of the accuracy of any estimated quantities on the Bid Form 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, 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 of the

total amount of the Bid and have as a surety thereon a Surety company currently authorized and licensed in good standing to conduct business within the State. Bid Bonds shall be executed by a Mississippi agent or a qualified nonresident agent. The Mississippi agent or qualified nonresident agent shall be in good standing and currently licensed by the Insurance Commissioner of the State to represent Surety companies. A certified check may be used in lieu of a Bid Bond.

A conditional or qualified Bid will not be accepted.

AWARD If, at the time this contract is to be awarded, the lowest Bid submitted by a responsive Bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded. If such Bid exceeds such amounts, the Owner may reject all Bids.

The award will be made based on the lowest and best bid for the base bid or for the base bid and any combination of alternate bids, as the Owner chooses.

The responsiveness of the Bidder will be determined by the completeness and regularity of the Bid, without excisions or special conditions and having no alternative Bids for any items unless provided for on the Bid Form. The responsibility of the Bidder will be determined by whether or not he maintains a permanent place of business, has adequate plant equipment to do the work properly and within the time limit that is established and has adequate financial status to meet his obligations contingent to the work.

A PERFORMANCE BOND and a PAYMENT BOND, each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety listed on the Treasury Department's most current list (Circular 570 as amended), approved by the OWNER, will be required for the faithful performance of the contract.

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

The party to whom the contract is awarded will be required to execute the Agreement and obtain and submit the PERFORMANCE BOND, PAYMENT BOND and CERTIFICATES OF INSURANCE within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute and submit the Agreement, the PERFORMANCE BOND, the PAYMENT BOND and CERTIFICATES OF INSURANCE the OWNER may at his option determine 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) calendar days of receipt of acceptable PERFORMANCE BOND, PAYMENT BOND, CERTIFICATES OF INSURANCE 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, and issue a NOTICE TO PROCEED. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN

NOTICE withdraw his signed Agreement without further liability on the part of either party. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER. Should there be reason(s) 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) calendar 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 he deems necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

THE CONTRACT

Where all or part of the work is to be unit price work, the estimated item quantities set out in the Bid form are not guaranteed and are solely for the purpose of comparison of Bids; payment will be made on the actual quantity of each item installed and accepted. It is understood that the quantities of items may be increased and decreased for which payment will be made at the unit price Bid. It is also understood that the location of some work items may be changed from that shown on the drawings and such change in location shall be made at the unit price Bid for the various items of work involved.

Included in these documents is the "Prime Consultant/Contractors EEV Certification and Agreement". This document must be executed and made part of the contract after award. It does not have to be executed at the time of the bidding.

If multiple contracts are bid, each contract will be amended by strikethrough of non-applicable contract wording to clearly identify which contract is being awarded. The following sections will be amended in this manner: 00 51 00 Notice of Award, 00 52 13 Contract Agreement, 00 55 00 Notice to Proceed, 00 61 13.13 Performance Bond, 00 61 13.16 Payment Bond.

INTERPRETATIONS AND ADDENDA

Should a Bidder find discrepancies in, or omissions from the specifications or other contract documents, or should he be in doubt as to the meaning of any part thereof, he should at once submit to COOK COGGIN ENGINEERS, INC., P.O. Box 1526, Tupelo, Mississippi 38802, a written request for an interpretation. No oral interpretation will be made to any Bidder as to the meaning of any of the Contract Documents, or no oral interpretation shall be effective to modify any of the provisions of the contract documents. The Engineers will make interpretations by duly issued Addenda which will be mailed or delivered to Bidders of record receiving copies of the Contract Documents; and neither the Owner nor the Engineers will be responsible for any other explanation or interpretation of the documents.

STORM WATER POLLUTION PREVENTION

The Mississippi Department of

Environmental Quality (MDEQ) is the National Pollutant Discharge Elimination System (NPDES) permit authority for the State of Mississippi. Current regulations require NPDES stormwater construction discharge permit coverage for construction activities which disturb one or more acres of land, or less than one acre if part of a larger common plan of development or sale.

BID FORM

Proposal of _____

(hereinafter called "Bidder"), organized and existing under the laws of the State of

_____, doing business as _____

_____ * to **CITY OF TUPELO** (hereinafter called "Owner").

In compliance with your Advertisement for Bids, Bidder hereby proposes to perform all work for **TUPELO WONDURA RUBBISH SITE EXPANSION 2025, BID NO. 2025-028PW** in strict accordance with the Contract Documents, within the time set forth herein, and at the prices stated below.

By submission of this Bid, each Bidder certifies, and in the case of a joint bid, each party thereto certifies as to his own organization that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor.

Bidder hereby agrees to commence work under this contract on the date to be specified in the Notice to Proceed and to fully complete the project within 45 consecutive calendar days. Bidder further agrees to pay as liquidated damages, the sum of \$500.00 for each consecutive calendar day thereafter as provided in Article 14 of the General Conditions, said amount to cover the cost of additional resident inspection and construction engineering.

Bidder acknowledges receipt of the following addendum:

*Insert "a corporation", "a partnership", or "an individual" as applicable.

Bidder agrees to perform all work described in the Contract Documents for the following unit prices or lump sum:

BID SCHEDULE

Each bid item unit price shall include all applicable taxes and fees.

Write/Type unit prices and bid prices, as clearly as possible, in number format.

Item No.	Item Description	Estimated Quantity	Unit	Bid Unit Price	Bid Price
TUPELO WONDURA RUBBISH SITE EXPANSION 2025, BID NO 2025-028PW					
BASE BID					
1	Mobilization	1	LS	\$	\$
2	Unclassified Excavtion (PM)	34,607	CY	\$	\$
3	18" HDPE Pipe	36	LF	\$	\$
4	Crushed Stone (Size III Stabilizer Coarse Aggregate)	325	Tons	\$	\$
5	Geotextile Fabric Stabilization	638	SY	\$	\$
6	Silt Fence	2,920	LF	\$	\$
7	Seeding	0.81	Acres	\$	\$
8	Vegetative Materials for Mulch	2.43	Tons	\$	\$
9	Commercial Fertilizer (13-13-13)	0.81	Tons	\$	\$
10	48" Diameter Manholes, 4' Riser	1	Ea	\$	\$
11	Overhead Power Allowance (TWL)	1	LS	\$ 17,500.00	\$ 17,500.00
12	Electrical Package (Includes Power Distribution Panel, Breaker Panel, Safety Swithc, Meter Base, Weatherhead, Ground Grid, Wiring and Conduits and any other Necessary Equipment and all Labor to Connect Power Distribution Panel to Electrical Service per Plans.	1	LS	\$	\$
TOTAL BASE BID					\$

PROPOSED SUBCONTRACTORS

In accordance with General Condition 6.15.4, the Contractor shall not award to Subcontractors in excess of fifty (50%) percent of the contract value, without prior approval of the Owner.

Subcontractor	Address	Work to be Subcontracted	Amount

All of the above prices shall include all labor, materials, taxes, overhead, profit, bonds, insurance, and other costs necessary to cover the finished work of the several kinds called for.

Bidder acknowledges that (1) each unit price provided includes an amount considered by the Bidder to be adequate to cover the Contractor's overhead and profit for each separately identified item, (2) estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, (3) up to a ten percent reduction in the quantities for unit priced items may be applied to establish a construction contract amount that is within the funds available for construction and (4) final payment for all unit priced bid items will be based on actual quantities, determined as set forth in the Contract Documents.

IT IS UNDERSTOOD THAT THE CONTRACT WILL BE AWARDED BASED ON THE TOTAL BASE BID OR ON THE BASE BID AND ANY COMBINATION OF ALTERNATE BIDS AS THE OWNER CHOOSES.

UNIT PRICED ITEMS INCLUDED IN ANY ALTERNATE BIDS THAT HAVE THE SAME ITEM NUMBER AND ITEM DESCRIPTION AS FOR THE BASE BID SHALL BE OFFERED AT THE SAME UNIT PRICE IN ANY ALTERNATE BID AS OFFERED IN THE BASE BID.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this Bid, Bidder will execute the formal contract attached within 10 calendar days and deliver a Surety Bond or Bonds as required

by Article 5 of the General Conditions.

The bid security attached in the sum of _____

_____ Dollars,

(\$ _____) (5% of the Total Bid) is to become the property of the Owner in the event the contract and bond are not executed within the time set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Bidder hereby certifies that he is a:

_____ Resident Contractor
(See Information for Bidders)

_____ Non-Resident Contractor

Respectfully submitted this the _____ day of _____, 20__.

By _____ Title _____

Company _____

Address _____

Phone _____

Employer Identification No. _____

Email Address _____

SEAL (If bid is by a corporation.)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____

as Principal, and _____

as Surety, are hereby held and firmly bound unto **CITY OF TUPELO**, as owner in the penal sum of _____

_____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed, this ____ day of _____, 20__.

The condition of the above obligation is such that whereas the Principal has submitted to **CITY OF TUPELO** a certain Bid, attached hereto and hereby made a part hereof to enter into contract in writing, for the **TUPELO WONDURA RUBBISH SITE EXPANSION 2025, BID 2025-028PW.**

NOW, THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (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 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 first set forth above.

Principal

Surety

SEAL

By:_____

PRIME CONSULTANT / CONTRACTOR EEV CERTIFICATION AND AGREEMENT

Project No: TUPELO WONDURA RUBBISH SITE EXPANSION 2025

Termini: CITY OF TUPELO

Prime Consultant: _____

By executing this Certification and Agreement, the undersigned verifies its compliance with the Mississippi Employment Protection Act, Section 71-11-3 of the Mississippi Code of 1972, as amended, and any rules or regulations promulgated by Mississippi Transportation Commission [MTC], Department of Employment Security, State Tax Commission, Secretary of State, Department of Human Services in accordance with the Mississippi Administrative Procedures Law (Section 25-43-1 et seq., Mississippi Code of 1972, as amended), stating affirmatively that the individual, firm, or corporation which is contracting with MTC has registered with and is participating in a federal work authorization program* operated by the United States Department of Homeland Security to electronically verify information of newly hired employees pursuant to the Immigration Reform and Control Act of 1986, Pub.L. 99-603, 100 Stat 3359, as amended. The undersigned agrees to inform the MTC if the undersigned is no longer registered or participating in the program.

The undersigned agrees that, should it employ or contract with any subconsultant(s) and/or subcontractor(s) in connection with the performance of this Contract, the undersigned will secure from such subconsultant(s) and/or subcontractor(s) verification of compliance with the Mississippi Employment Protection Act. The undersigned further agrees to maintain records of such compliance and provide a copy of each such verification to MTC, if requested, for the benefit of the MTC or this Contract.

EEV* Company Identification Number [Required]

The undersigned certifies that the above information is complete, true and correct to the best of my knowledge and belief. The undersigned acknowledges that any violation may be subject to the cancellation of the contract, ineligibility for any state or public contract for up to three (3) years, the loss of any license, permit, certificate or other document granted by any agency, department or government entity for the right to do business in Mississippi for up to one (1) year, or both, any and all additional costs incurred because of the contract cancellation or the loss of any license or permit, and may be subject to additional felony prosecution for knowingly or recklessly accepting employment for compensation from an unauthorized alien as defined by 8 U.S.C §1324a(h)(3), said action punishable by imprisonment for not less than one (1) year nor more than five (5) years, a fine of not less than One Thousand Dollars (\$1,000.00) nor more than Ten Thousand Dollars (\$10,000.00), or both, in addition to such prosecution and penalties as provided by Federal law.

BY: _____
Authorized Officer or Agent Date

Printed Name of Authorized Officer or Agent Title of Authorized Officer or Agent of Contractor / Consultant

SWORN TO AND SUBSCRIBED before me on this the ____ day of _____, 20____.

NOTARY PUBLIC
My Commission Expires: _____

* As of the effective date of the Mississippi Employment Protection Act, the applicable federal work authorization program is E-Verify™ operated by the U. S. Citizenship and Immigration Services of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration.

NOTICE OF AWARD

DATE: _____

TO: _____

PROJECT DESCRIPTION: **TUPELO WONDURA RUBBISH SITE EXPANSION 2025**

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated _____, 20____.

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 ten (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 TUPELO
Owner

By _____

Title Mayor Todd Jordan

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By _____

this ____ day of _____, 20____.

By _____

Title _____

CONTRACT AGREEMENT

This Agreement, made this the _____ day of _____, 20____, by and between _____, hereinafter called the Contractor, and the **CITY OF TUPELO**, hereinafter called the Owner.

WITNESSETH:

That the Contractor and Owner for the consideration hereinafter named agree as follows:

Article 1 SCOPE OF WORK

The Contractor shall furnish all materials for the construction of **TUPELO WONDURA RUBBISH SITE EXPANSION 2025** for the Owner, all in the manner provided for in the Specifications and Contract Documents, dated **AUGUST 2025** and Construction Plans entitled **TUPELO WONDURA RUBBISH SITE EXPANSION 2025** Sheets 1 through 7, dated **AUGUST 2025**, which are fully incorporated herein as if hereto attached or herein repeated.

Article 2 THE CONTRACT SUM

The Owner shall pay the Contractor for the complete performance of this Contract a total amount of _____

_____ Dollars
(\$ _____) being the amount of the accepted proposal for **TUPELO WONDURA RUBBISH SITE EXPANSION 2025** subject to proper additions and/or deductions at the lump sum and/or unit price as stated in the proposal or otherwise provided for by Modification, the corrected amount referred to being full compensation for furnishing, installing and connecting all of the items of materials, labor and equipment necessary for the Work and the completion of the Project in full accordance with the Plans and Specifications and Contract Documents.

Payment therefore to be made in accordance with applicable specifications, provided: That the Engineers have certified to the Owner that all of the work has been completed and that payment is due therefore and provided further that the Contractor has submitted evidence satisfactory to the Owner and all payrolls, materials bills and other indebtedness, labor and materials liens connected with the work have been paid.

Article 3 TIME OF COMPLETION

The Contractor shall commence work at the time stated in the Notice to Proceed issued by the Owner and shall complete the work within 60 consecutive calendar days from and including the starting date stated in said notice unless this period is extended by Modification by the Owner and the Engineers, due to delays beyond the control of the Contractor and/or extensions to the Contract.

It is mutually agreed between the parties hereto that time is the essence of this contract; and in the event construction of the work is not completed within the time specified herein, it is agreed that from the compensation otherwise to be paid to the Contractor, the Owner may retain the sum of \$500.00 per day for each calendar day thereafter that the work remains uncompleted, which sum shall represent the actual damages which the Owner will have sustained per day by failure of the Contractor to complete the work within the time stipulated; and this sum is not a penalty, being the stipulated damage the Owner will have sustained in event of such default by the Contractor.

Article 4. ADDITIONAL SURETY

It is further mutually agreed between the parties hereto that if, at any time after the execution of this agreement and the Surety Bond hereto attached for its faithful performance, the Owner shall deem the surety or sureties upon such bond to be unsatisfactory, or if for any reason such bond, in the opinion of the Owner, ceases to be adequate to cover the performance of the work, the Contractor, at his expense, within five days after receipt of the notice from the Owner to do so, shall furnish additional bond or bonds in such form and amount, not in excess of the original amount, and with surety or sureties as shall be satisfactory to the Owner.

Article 5 ROYALTIES AND PATENTS

It is further mutually agreed between the parties hereto that the contract price of the Contractor shall include payment by the Contractor of all royalties and license fees, if any; and the Contractor shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof.

Article 6 DAMAGE TO PERSONS AND PROPERTY

It is further mutually agreed that the Contractor shall indemnify and hold harmless the Owner and the Engineer and their agents and employees from and against any and all liability of every nature, kind and character which may be incurred in connection with the performance or fulfillment of the Work or such other liability resulting from negligence or otherwise on the part of the Contractor, including but not limited to injury to persons and damage to properties, and the structures and improvements thereon, adjacent to the Project, and shall indemnify and hold harmless the Owner from all costs and damages, including attorney's fees, which may be suffered by reason of the failure to fully and completely perform under the Contract Documents and shall fully reimburse Owner for all expenditures of every kind, character and description, including attorney's fees, which may be incurred by Owner in making good any and every default which may exist on the part of the Contractor in connection with its performance under the Contract Documents. Article 7.
GENERAL CONDITIONS

The Contractor has read, understands and accepts the General Conditions and Special Conditions as set forth in the Specifications and Contract Documents.

In witness whereof, the parties hereto have executed this Agreement on the day and year first mentioned in 3 counterparts, each of which shall, without proof or accounting for the other counterparts, be deemed an original contract.

OWNER: **CITY OF TUPELO**

CONTRACTOR:

By _____

By _____

Title Mayor Todd Jordan

Title _____

ATTEST: _____

ATTEST: _____

Title _____

Title _____

NOTICE TO PROCEED

TO: _____ DATE: _____

Project: **TUPELO WONDURA RUBBISH SITE EXPANSION 2025**

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 60 consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20 __.

CITY OF TUPELO
Owner

By _____

Title Mayor Todd Jordan

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

By _____

this ____ day of _____, 20 __.

By _____

Title _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____
, hereinafter called (Corporation, Partnership, or Individual)

Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, and held and firmly bound unto _____

CITY OF TUPELO

(Name of Owner)

71 EAST TROY STREET, TUPELO, MS 38804

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____

_____ Dollars (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of:

TUPELO WONDURA RUBBISH SITE EXPANSION 2025

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise

to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed there under or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on the BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ 3 _____
(Number)

counterparts, each one of which shall be deemed an original, this the _____
day of _____, 20__.

ATTEST:

Principal

(Principal) Secretary

BY _____

(SEAL) _____
(Address)

(Address)

(Surety)

ATTEST:

(SEAL)

(Witness to Surety)

BY _____
Attorney-in-Fact

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

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

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____
, hereinafter called (Corporation, Partnership, or Individual)

Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, and held and firmly bound unto

CITY OF TUPELO

(Name of Owner)

71 EAST TROY STREET, TUPELO, MS 38804

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars

(\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of:

TUPELO WONDURA RUBBISH SITE EXPANSION 2025

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due to materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed there under or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on the BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in 3 counterparts, each
(Number)
one of which shall be deemed an original, this the _____ day of _____, 20____.

ATTEST:

_____	Principal
(Principal) Secretary	BY _____
(SEAL) _____	_____
	(Address)

ATTEST:

_____	(Surety)
(SEAL)	
_____	BY _____
(Witness to Surety)	Attorney-in-Fact
_____	_____
(Address)	(Address)
_____	_____

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.
IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, **BEN LOGAN**, the duly authorized and acting legal representative of the **CITY OF TUPELO**, do hereby certify as follows:

I have examined the attached contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements are adequate and have has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

_____ Date: _____



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No. Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
INSURED	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Y / N <input type="checkbox"/> N / A <input type="checkbox"/>						WC STATUTORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

INDEX TO GENERAL CONDITIONS

<u>Article</u>	<u>Title</u>
1	Definitions
2	Preliminary Matters
3	Correlation, Interpretation and Intent of Contract Documents
4	Availability of Lands and Subsurface Conditions
5	Bonds and Insurance
6	Contractor's Responsibilities
7	Work by Others
8	Owner's Responsibilities
9	Engineer's Status During Construction
10	Changes in the Work
11	Change of Contract Price
12	Change of the Contract Time
13	Guaranty
14	Payments and Completion
15	Suspension of Work and Termination
16	Miscellaneous
17	Arbitration

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

Acceptance: Acceptance by the Engineer of the Work as being in substantial conformance with the Contract Documents and recommendation to the Owner for final inspection.

Final Acceptance: Acceptance by the Owner of the Work as being fully complete in accordance with the Contract Documents (subject to waiver of claims) and final payment made.

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 additions, 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 heretofore 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.

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 Contract Agreement, Addenda, Information for Bidders, Bid, Bonds, Notice of Award, these General Conditions, Supplementary General Conditions, 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 or working days stated in the Agreement for the completion of the Work.

Contracting Officer: 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 construction plans 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.

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 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: The 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.

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.

Samples: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

Shop Drawings: All drawings, diagrams, illustrations, brochures, performance charts, 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.

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. This will include general specifications and item (technical) specifications.

Standards: The following words, symbols, letters, or abbreviations shall be deemed to have the following meaning and shall refer to the latest current revision of said standard or specification applicable in effect of the date of opening bids:

AASHTO	-	American Association of State Highway and Transportation Officials
ACI	-	American Concrete Institute
AIA	-	American Insurance Association (formerly National Board of Fire Underwriters
ANSI	-	American National Standards Institute
ASME	-	American Society of Mechanical Engineers
ASTM	-	American Society for Testing Materials
AWWA	-	American Water Works Association
NEMA	-	National Electrical Manufacturer's Association
NEC	-	National Electrical Code

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 date as certified by written notice by the Engineer at which time the Work (or a specified part thereof) has progressed to the point where, in the opinion of the Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purpose for which it is intended; or if there be no such certification, the date when final payment is due in accordance with paragraph 14.9. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion.

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.

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 notice 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 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 or best 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 forms.

Execution of Agreement:

2.2 At least three counterparts of the Agreement and such other Contract Documents as practicable will be executed and delivered by Contractor to the Owner within 10 days of receipt by the Contractor.

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, easements and rights-of-way obtained, adjacent properties upon which easements have not been obtained, and with all local conditions and 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 the Drawings and 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 on the date stated in 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.

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.

Schedule of Completion:

2.8 Within 10 days after delivery of the Notice to Proceed by Owner to Contractor, Contractor shall submit to Engineer for review, 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. The Engineer shall approve this schedule or require revisions thereto within 14 days of its submittal.

2.9 After delivery of the executed Agreement by Owner to Contractor, but before starting the Work at the site, a preconstruction conference may 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, Project Representatives, Contractor and his superintendent.

Qualification of Subcontractors Materialmen and Suppliers:

2.10 Within 14 days after award of Contract, the Contractor will 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 materials or equipment) proposed for those portions of the Work as to which the identity of the Subcontractors and other persons and organizations must be submitted as specified in the Contract Documents. Within 30 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.

2.11 If, prior to the Notice of Award, the Owner or the Engineer has reasonable objection to and refuses to accept any Subcontractor, person or organization listed, the apparent low Bidder may, prior to Notice of Award may submit an acceptable substitute without an increase in his Bid price.

ARTICLE 3: CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS

3.1 It is the intent of the Engineer and Owner through 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 Engineer's attention in writing at once and before proceeding with the Work affected thereby. The various Contract Documents shall be given precedence, in case of conflict, error or discrepancy, as follows: Addenda, General Specifications, Item (Technical) Specifications, Drawings, Information for Bidders, Supplemental General Conditions, and General Conditions.

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 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 specifications division are not delineated by trade or by subcontract. Items specified under one division of the specifications shall be furnished, installed and connected as though recited in each division of the specifications.

3.6 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 the Work shall be installed or erected in accordance with the best practices of the particular trade.

3.7 The Contractor shall be responsible for making the construction of habitable structures under this Contract rainproof, and for making equipment and utility installations properly perform the specified function.

3.8 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.

3.9 Brand names where used in the technical specifications, are intended to denote the standard of quality required for the particular material or product. 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 suitable 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. (When a brand name, catalog number, model number, or other identification, is used without the phrase "or equal", or "or equivalent", the Contractor shall use the brand specified.)

ARTICLE 4 - AVAILABILITY OF LANDS AND SUBSURFACE CONDITIONS

Availability of Lands:

4.1 The Owner will furnish, as indicated in Contract Documents, the lands upon which the Work is to be done and such other lands which are designated for the 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 other than as set forth in easements obtained by the Owner shall be the responsibility of the Contractor. The Contractor will provide for

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 ground, 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 from an investigation of the site. Failure by the Contractor to acquaint himself with the project site will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work.

ARTICLE 5 - BONDS AND INSURANCE

Performance and Payment Bonds and Certificates of Liability Insurance are NOT REQUIRED for MATERIALS ONLY contracts.

Bonds:

5.1 The Contractor shall within 10 days after the receipt of the Notice of Award furnish the Owner with a performance bond and payment bond in penal sums equal to the amount of the contract price, conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of the contract documents, and upon the prompt payment by the Contractor to all persons supplying labor and materials in the prosecution of the work provided by the contract documents. Such bonds shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the state in which the work is to be performed. The expense of these bonds shall be borne by the Contractor. If at any time a surety on any such bond is declared a bankrupt or loses its right to do business in the state in which the work is to be performed, the Contractor shall, within 10 days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments of the Contract price shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the Owner.

Contractor's Liability Insurance:

5.2 At all times applicable to this Agreement, Contractor shall procure and maintain, at it's sole expense as a minimum the insurance as listed in 5.5 below. Owner does not represent that insurance coverage and limits listed will be adequate to protect Contractor or Contractor's interests. Insurance shall be obtained from companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. The Contractor shall submit to the Owner, prior to the commencement of the Work, a completed, duly executed and authorized Certificate of Insurance as evidence that the insurance requirements set forth are in full force and effect. Policies providing such coverage shall contain provisions that no cancellation or material changes in the policies shall become effective except on 15 days' advance written notice thereof to the Owner.

5.3 Contractor agrees to require that all policies of insurance which are in any way related to the Work and that are secured and maintained by Contractor or any Subcontractor or Sub-subcontractor will include clauses providing that each underwriter shall waive all of its rights of recovery, under subrogation or otherwise, against owner. Furthermore, Contractor waives and shall cause any Subcontractor or Sub-subcontractor to waive all rights of recovery against Owner, which Contractor or any Subcontractor or Sub-subcontractor may have or acquire because of deductible clauses in, or inadequacy of, limits of any policies of insurance maintained by Contractor. All such policies except for the Worker's Compensation and Employer's Liability insurance, and the Professional/Errors and Omissions coverage insurance, shall designate Owner and Engineer as additional insured/certificate holder.

5.4 Contractor shall cause any Subcontractor or Sub-subcontractor to obtain and maintain insurance consistent with the provisions of this Article and submit an appropriate Certificate of Insurance prior to commencement of any Work.

5.5 SCHEDULE OF INSURANCE

5.5.1 COMMERCIAL GENERAL LIABILITY INSURANCE

Commercial General Liability Insurance, endorsed to provide coverage for: Contractual Liability, particularly the applicable provisions of the indemnity sections of this Agreement; explosion, collapse or structural injury to property of others including underground utility facilities; and Contractor's Protective Liability (if subcontracting is authorized), and Products and Completed Operations (for a minimum of three years discovery period after acceptance of the Work.)

Each Occurrence	\$1,000,000
General Aggregate	\$1,000,000

5.5.2 COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

Commercial Automobile Insurance which shall include coverage for all owned, non-owned and hired vehicles.

Combined Single Limit \$1,000,000 Each Accident

5.5.3 UMBRELLA LIABILITY INSURANCE

Umbrella Liability Insurance with limits of at least \$1,000,000 per occurrence for bodily injury or property damage in excess of the limits afforded for Commercial General Liability, Commercial Automobile Liability and Employer's Liability.

5.5.4 WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

Contractor agrees to comply with Worker's Compensation laws of the state where the Work is performed and maintain a Worker's Compensation and Employer's Liability policy which shall cover all of Contractor's employees engaged in the Work. This policy shall be endorsed to provide: Other states endorsement, voluntary compensation coverage and occupational disease. If the Work is to be performed on or near navigable waters, the policy shall include United States Longshoreman's and Harbor Workers coverage.

Worker's Compensation – Statutory

Employer's Liability – \$1,000,000 Each Accident

\$1,000,000 Disease – Each Employee

\$1,000,000 Disease – Policy Limit

5.5.5 BUILDERS RISK INSURANCE

The Contractor shall maintain property insurance to fully cover the insurable portion of the project for the benefit of the Owner.

5.5.6 PROFESSIONAL/ERRORS AND OMISSIONS COVERAGE

If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.

Insurance shall provide a minimum of \$1,000,000 of coverage per claim.

5.5.7 OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY (OCP)

The Contractor shall maintain an OCP policy with the Owner as Named Insured, with the Engineer named as Additional Insured and Certificate Holder, in a combined single limit of not less than \$1,000,000. This policy is to remain in effect until completion and acceptance of the entire project.

Cancellation

5.6 If any insurance should be cancelled 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.

Please refer to the "SAMPLE" CERTIFICATE OF LIABILITY INSURANCE form that precedes this section.

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, procedures and safety 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.

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.

6.6 Stored Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located so as to facilitate prompt inspection.

6.7 Inspection and testing of all materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the Contract Documents.

6.7.1 The Owner shall provide all inspection and testing services not required by the Contract Documents. The Contractor shall provide at his expense the testing and inspection services required by the Contract Documents.

6.7.2 If the Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any work to specifically be inspected, tested, or approved by someone other than the Contractor, the Contractor will give them timely notice of readiness. The Contractor will then furnish the Engineer the required certificates of inspection, testing or approval.

6.7.3 Inspections, tests or approvals by the Engineer or others shall not relieve the Contractor from his obligations to perform the work in accordance with the requirements of the Contract Documents.

6.8 Plans are drawn and the Specifications are written naming certain brands of specialized equipment or products. Brand names so cited are cited for the purpose of establishing the quality desired.

6.8.1 The brands of items of equipment listed in these specifications are hereby designated to be the basic brands. Bidders shall submit a price for furnishing and installing the lowest quoted basic brand or approved alternate brand of each major product or equipment items in the base bid.

6.8.2 As the Owner is interested in obtaining the lowest practical cost and encouraging competition, a price may be offered based on any alternate brand which the bidder determines to be equal to the basic brand. Bidder shall clearly identify the alternate brand for each item proposed as an equal for the basic brand item on the Bid Form. The Owner will approve alternate brands offered by the Bidder provided the alternate item is determined by the Owner to be equal to

the basic item specified. If no basic or alternate brands are identified then the bid is presumed to be based on the basic brands.

Owner will evaluate alternate brands offered and may accept any, all or none of the items prior to executing the contract agreement.

6.8.3 A complete set of supporting data shall be submitted with the bid for each alternate item to support the claim that it is equal to basic brand. Sufficient data, including horsepower or energy requirements, performance, operation and maintenance, manpower and supply requirements shall be submitted in order for the Owner to evaluate the equality of the offered product or equipment. Any variance with the specifications shall be listed and failure to do so may be grounds for rejection of the alternate item. Bids submitted based on incorporating alternative products or equipment without providing the supporting data as set out will be deemed non-responsive.

6.8.4 Submittals shall include complete design calculations including the effect substituted equipment or materials will have on all affected system processes. If the proposed substituted equipment or materials will require a change in any buildings, structures, piping, controls, work, etc., the submittal shall include detailed sketches and specifications of the necessary changes. Submittals shall also include an up-to-date list of at least five present users of the proposed items including names, addresses, and present municipal users of the proposed items including names, addresses and telephone numbers. The submission of insufficient data to determine equality as set out herein shall be sufficient grounds for rejection of the alternate item and the bid being deemed non-responsive.

6.8.5 The cost of any change in structure, locations, connections, etc., necessary for any alternate brand accepted shall be borne by the Contractor, as well as the cost of revision of the Drawings and Specifications.

6.8.6 No alternate equipment or materials will be considered unless the Manufacturer offers documented proof that the alternate items have been in general usage in similar applications for at least the two preceding years.

6.8.7 Submittals will be compared for equality by evaluating the life cycle cost including cost of modifications and redesign, the compatibility of the item offered with other items, the service experience record of the manufacturers or suppliers in attending to requests for repairs/parts by Owner and reliability of offered items in performing intended functions. Where the offeror does not have a two year experience record, substitute items may be considered provided the offeror furnishes a five year bond which guarantees replacement of the item in the event of failure as judged by the Engineer, in an amount equal to purchase price plus the actual cost of removal and re-installation.

6.8.8 The determination as to whether or not such alternates are acceptable shall rest solely with the Owner.

6.8.9 Approval by the Owner of alternate equipment or materials shall in no way serve as a guarantee that the equipment or materials will meet the performance and construction requirements as specified herein, and shall not relieve the Contractor from any responsibility or requirements under the contract. It shall be the Contractor's responsibility to produce an efficient product.

6.8.10 Delay caused by obtaining approvals for alternate products, materials or equipment will not be considered justifiable grounds for an extension of Contract Time.

6.8.11 Should any work or materials, equipment or products not conform with requirements of the Contract Documents or become damaged during the progress 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.

6.8.12 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.

Materials, Equipment, Products, and Substitutions:

6.9 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 the Engineer to determine their acceptability and obtain the Engineer's approval. No request for payment for substitute materials, equipment or product will be approved until this list has been received and approved by the Owner.

Concerning Subcontractors:

6.10 The Contractor will not employ any Subcontractor, other person or organization of the types referred to in paragraph 2.11 (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.

6.11 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 Application of Payment.

6.12 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.

6.13 The Contractor agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the Owner.

6.14 All Work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor.

6.15 The Contractor shall be responsible for the coordination of the trades, Subcontractors and materialmen engaged upon his Work.

6.15.1 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.

6.15.2 The Owner or Engineer will not undertake to settle any differences between the Contractor and his Subcontractors or between Subcontractors.

6.15.3 Notwithstanding 6.15.2 above, 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.

6.15.4 The Contractor shall not award work to Subcontractors in excess of fifty (50%) percent of the contract value, without prior approval of the Owner.

Patent Fees and Royalties:

6.16 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 the 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.

6.17 The Contractor shall be responsible for determining the application of patent rights and royalties on materials, appliances, articles or systems prior to bidding. However, the Contractor shall not be responsible for such determination on systems which do not involve purchase by him of materials, appliances and articles.

Permits:

6.18 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. The Owner shall assist the Contractor, when necessary, in obtaining such permits and licenses.

Electric Power and Lighting:

6.19 Electrical power as required during construction shall be provided by the Contractor at the Contractor's expense. Lighting shall be provided by the Contractor in all spaces at all times where necessary for good and proper workmanship, for inspection or for safety. No temporary power shall be used off temporary lighting lines without specific approval of the Owner. The Contractor will also pay all public utility charges.

Laws and Regulations:

6.20 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, the Contractor 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, the Contractor will bear all costs arising therefrom; however, it shall not be the Contractor's primary responsibility to make certain that the Drawings and Specifications are in accordance with such laws, ordinances, rules and regulations.

Taxes:

6.21 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:

6.22 The Contractor will keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site.

6.22.1 The Engineer shall furnish the Contractor a set of Drawings and Specifications for the Contractor to record the details of and changes to the Work as the work progresses. The Contractor shall keep the Record Drawings current and shall not cover or conceal any Work until the required information has been recorded. Record Drawings are considered an integral part of the Work and the Work will not be deemed to be complete, on schedule or satisfactory until the Record Drawings are provided. The Contractor shall furnish Record Drawings to the Engineer prior to the submission of the final application for payment.

6.22.2 In addition to the location and limits of all unit priced and lump sum pay items, the following items shall be recorded on the Record Drawings:

1. Depths of various elements in relation to datum.
2. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
3. Location of internal appurtenances concealed in construction with reference to visible and accessible features of the work.
4. Field changes of dimension and detail.
5. Changes made by Modification.
6. Details not on original Contract Drawings.
7. Locations of plugged openings for future connections.

6.22.3 Specifications and Addenda shall be legibly marked up to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
2. Changes made by Modification.
3. Other pertinent matters not originally specified.

Safety and Protection:

6.23 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:

6.23.1 All employees on the Work and other persons who may be affected thereby,

6.23.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and

6.23.3 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.

6.24 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:

6.25 In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

Shop Drawings, Samples and Other Submittals:

6.26 The Contractor shall submit to the Engineers, prior to the start of construction, detailed shop drawings and/or layouts of all manufactured or shop fabricated equipment, product samples and related information that he contemplates to furnish under this contract.

6.27 Shop Drawing / Sample Submittal Requirements

6.27.1 Shop drawings submitted to the Engineer shall bear the Contractor's stamp of approval certifying that they have been checked for conformance with the requirements of the contract documents. The Engineer will return any shop drawings submitted without this certification for re-submission. Shop drawings bearing the Contractor's certification which, in the Engineer's opinion are incomplete, contain numerous errors, have not been checked or only checked superficially, will be also be returned by the Engineer for re-submission.

6.27.2 Shop Drawings /Submittals must be complete, properly identified with the name of the project, dated, and each lot submitted must be accompanied by a letter of transmittal referring to the name of the project and to the

specification division and/or page number and referenced to the construction drawing number or sheet for identification of each item. Shop drawings for each type of work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. The sequential numbering system shall be used as the basis for maintaining a log suitable to tracking the submittal process.

6.27.3 Shop Drawings/Submittals shall be provided both printed on paper and in digital format (PDF) on CD.

6.27.4 Paper for printed copies shall be on standard paper. Text shall be on 8-1/2 inches x 11-inches. Drawings shall not be larger than 11-inches x 17-inches and shall be neatly folded to standard size. Printed copies shall be organized with a table of contents and bound in sections as appropriate and the sections shall be identified using indexed tabs. Provide seven (7) printed copies of each. The Engineer will retain three (3) copies, two (2) copies for the Engineer's use in the field and one (1) copy for the Owner's use. The balance of the copies provided will be returned to the Contractor.

6.27.5 Digital files shall be in Portable Document Format (PDF) and provided on CD. Filenames for PDFs shall be numbered sequentially as above for the submittal tracking process. Text shall be formatted for printing on 8-1/2 inches x 11-inches. Drawings shall be formatted for printing on 11-inches x 17-inches sheets. PDFs shall include a table of contents and be bookmarked the same as for indexed printed copies. Provide two (2) CDs of each.

6.27.6 With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

6.28 Shop Drawings shall consist of drawings, diagrams, illustrations, schedules, performances charts, brochures and other data, prepared for a portion of the work. Shop Drawings shall indicate the model numbers, options, type, size, quantity, arrangement, location, mode of operation, component materials and/or material certification, utility connections, wiring and control diagrams, anchorages, supports, performance and test data, factory-applied coatings, and any other information necessary to insure satisfactory fabrication, installation and operation of the completed project. Shop Drawings shall establish the actual detail of manufactured or fabricated items, indicate proper relation to adjoining work, amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure, and incorporate minor changes of design or construction to suit actual conditions.

6.29 The Contractor will also submit to the Engineer for review, with such promptness as to cause no delay in Work, Samples required by the Contract Documents. 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.

6.30 The Contractor shall thoroughly check all shop drawings for completeness and for compliance with the Contract Documents and shall verify all dimensions and field conditions and shall coordinate the shop drawings with the requirements of all other work related thereto, as required thereto, as required for proper and complete installation of the work. At the time of each submission, the Contractor will in writing state that the shop drawings are in conformance with the Drawings and Specifications or will call the Engineer's attention to any deviations that the Shop Drawings or Sample may have from the requirements of the Contract Documents.

6.31 Where a shop drawing as submitted by the Contractor indicates a departure from the Contract which the Engineer deems to be a minor adjustment in the interest of the Owner not involving a change in contract price or extension of time, the Engineer may review and return the drawing but the Engineer's review will be made with the understanding that it does not involve any change in the contract price or time and that it is subject generally to all contract stipulations and covenants.

6.32 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 Drawing or Sample shall constitute a representation 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 Drawing or Sample with the requirements of the Work and the Contract Documents.

6.33 In the event a third submittal of Shop Drawings is required, due to previous submittals of incomplete or incorrect Shop Drawings not in accordance with the Drawings and Specifications, the Contractor will be charged the cost incurred by the Engineer for the review of the third and all subsequent submittal reviews. The Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

6.34 If a shop drawing involves a change in structures, connections, etc., then the cost of changing structures, connections, etc., as well as plans and specifications to accommodate the item shall be borne by the Contractor. The Owner will impose a set-off against payments due to Contractor to secure reimbursement for such charges

unless the need for such change is beyond the control of Contractor.

6.35 No work requiring 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 Sample shall be kept in good order by the Contractor at the site and shall be available to the Engineer.

6.36 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 nor shall any review by the Engineer relieve the Contractor from responsibility for errors or omissions in the Shop Drawings.

Cleaning Up:

6.37 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 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 to substantially the same condition as existed prior to the work; and shall leave the whole in a neat and presentable condition.

6.38 Structures. 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., from the structure and shall leave his work "broom clean", or its equivalent, unless more exactly specified elsewhere in the Contract. The Contractor shall do the following special cleaning for all trades upon completion of the Work:

6.38.1 Remove putty stains and paint from and wash and polish all glass.

6.38.2 Remove all marks, stains, and other soil and dirt from finished concrete, painted, stained and decorated work.

6.38.3 Remove all temporary protections and clean and polish floors in buildings.

6.38.4 Clean and polish all hardware.

6.39 Withholding Payment. Cleaning up is considered to be an integral, important and necessary function of each item of work. Where work on unit price items are substantially complete but lack clean-up and/or corrections ordered by the Engineer, amounts shall be deducted from unit prices in partial payment estimates to amply

cover such clean-up and corrections. When the clean-up and/or corrections are performed, payment shall be made for amounts withheld.

6.40 General. In case of dispute, the Owner may remove the rubbish and charge the cost to the Contractor.

Public Convenience and Safety:

6.41 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. The Contractor shall, at all times, maintain proper access to the dwellings and/or businesses located on the private properties adjacent to the Project as required by, and in compliance with, the utility and construction easements acquired from the owners of said properties.

Sanitary Provisions:

6.42 The 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:

6.43 The Contractor shall indemnify and hold harmless the Owner and the Engineer and their agents and employees from and against any and all liability of every nature, kind and character which may be incurred in connection with the performance or fulfillment of the Work or such other liability resulting from negligence or otherwise on the part of the Contractor, including but not limited to injury to persons and damage to properties, and the structures and improvements thereon, adjacent to the Project, and shall indemnify and hold harmless the Owner and the Engineer from all costs and damages, including attorney's fees, which may be suffered by reason of the failure to fully and completely perform under the Contract Documents and shall fully reimburse Owner and the Engineer for all expenditures of every kind, character and description, including attorney's fees, which may be incurred by Owner and

Engineer in making good any and every default which may exist on the part of the Contractor in connection with its performance under the Contract Documents.

Responsibility for Connecting to Existing Work:

6.44 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:

6.45 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 owners thereof. The Owner will be responsible for obtaining permits necessary for the work.

6.46 The Contractor, at his own expense, shall be required to maintain the streets and thoroughfares disturbed in a passable condition providing means of ingress and egress to persons residing and/or by the Work, conducting business thereon specifically, but not by way of limitation, the Contractor shall maintain proper access to the dwellings and/or businesses located on the property adjacent to the Project at all times during the Project as is provided in the utility and construction easements obtained from the owners of said adjacent property.

6.46.1 The Contractor shall provide additional earth backfill or additional surfacing materials for excavation and/or trenches in streets or thoroughfares, if and when the shrinkage sets in, and shall shape and re-shape and grade and re-grade as, in the opinion of the Engineer, is necessary to maintain all thoroughfares disturbed in good condition from the time of initial excavation to the date of final acceptance. In general, the Contractor shall not be required to construct or maintain detours, or to maintain streets disturbed beyond the date of final acceptance of the work.

6.46.2 The Contractor shall provide facilities on a 24 hour, 7 day basis for pulling out vehicles bogged down due to his operations.

6.46.3 At all times, while the work is in progress the Contractor shall take precautions for the protection of all public by placing and maintaining adequate flagmen, barricades, red flags and/or lights, at locations where streets and public thoroughfares have been disturbed by excavations.

Cooperation with Governmental Departments, Public Utilities, Etc.:

6.47 The Contractor 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 structures connected therewith, that are encountered in the Work in order that such items may be properly shored, supported and protected. 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.

6.47.1 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.

6.47.2 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.

Public Convenience and Premises:

6.48 Contractor shall confine his apparatus, storage of materials, and operations of his workmen to limits indicated by law, ordinances, permits, and shall not unnecessarily encumber any part of site.

6.48.1 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.

6.48.2 Contractor shall arrange and cooperate with the 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:

6.49 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 at the Contractor's expense.

6.49.1 The existence of, and location of some of the known utilities and obstructions are indicated on the plans but are not guaranteed. The Contractor shall, in addition to the requirements provided in Section 6.47, make sufficient investigation and inspections, at the site of the work, to enable him to determine the existence of and exact nature and location of all such drainage structures, underground and overhead obstructions, fences, and public and private utilities that will be disturbed in the prosecution of the work. The Contractor shall repair or replace such utilities and improvements which are damaged by his operations so as to function properly, at his own expense and in a manner and condition equal to that of such utilities and improvements prior to damage. Fences which must be crossed shall be repaired to an "as was" condition.

6.50 Fuel, Energy and Water. The Contractor shall furnish all fuels, electric power and other energies, water and other consumables used in the prosecution of the work including temporary heat to prevent injury from dampness and cold and testing and trial operations until in the opinion of the Engineer, the work or a part thereof, is Substantially Complete and in use by the Owner, at which time the Owner will begin paying power bills for that part. Arrangements shall be made in advance of need with the utilities involved.

6.51 Flood Protection. The Contractor shall assume complete responsibility for construction and protection of work and property from flood damage in flood prone areas.

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 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.

7.5 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.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.1 The Owner will issue all communications to the Contractor through the Engineer.

8.2 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.

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 16 of these General Conditions and shall not be extended without written consent of the Owner and the Engineer.

9.1.1 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 mediation if the parties hereto mutually agree, or in a court of competent jurisdiction within the State in which the Project 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

exhaustive or continuous on-site observations to check the quality or quantity of the Work. His efforts will be directed toward providing assurance for 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.

9.2.1 The Engineer and his representatives will at all times have access to the work. In addition, authorized representatives and agents of any participating Federal or State agency shall be permitted to inspect all of the work. The Contractor will provide proper facilities for such access and observation of the work and also for any inspection, or testing thereof.

Clarifications and Interpretations:

9.3 The Engineer will issue with reasonable promptness such written clarifications 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.

9.4 Reference Points. The Engineer shall furnish and establish base lines for locating the principal component parts of the project together with a suitable number of bench marks adjacent to the project.

9.4.1 The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense of replacement.

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 conform to the requirements of the Contract Documents or does not meet the requirements of any inspection, test or approval referred to, 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.

9.5.1 If any work is covered, contrary to the instructions of the Engineer, it must, if requested by the Engineer, be uncovered for his observation and replaced at the Contractor's expense. If the Engineer considers it necessary or advisable that covered work be inspected or tested by others, the Contractor, at the Engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the work in questions, furnishing all necessary labor, materials, tools, and equipment.

Project Representatives:

9.6 The Engineer will provide observation sufficient to ascertain if construction is in substantial compliance with the design intent of the Drawings and Specifications.

Decisions on Disagreements:

9.7 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 a decision which he shall render in writing within a reasonable time.

Limitations on Engineer's Responsibilities

9.8 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.

9.9 The Engineer will not be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions and programs incident thereto, and the Engineer will not be responsible for the Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 The Engineer will not be responsible for the acts or omissions of the Contractor, or any Subcontractors, or any of their agents or employees, or any other person performing any of the Work.

9.11 The Engineers' construction engineering services do not include any administration of jobsite safety which is the sole responsibility of the Contractor. Any reference to safety in the Contract Documents shall not create any duty of jobsite safety administration or oversight by the Engineers.

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, in writing, authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents.

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 6.25.

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 10.1, and Work performed in an emergency as provided in paragraph 6.25 and any other claim of the Contractor for a change in the Contract Time or the Contract Price which is approved by the Engineer and the Owner.

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 if requested.

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 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.

11.2.1 Except as herein provided, no order, statement, or conduct of the Owner shall be treated as a Change Order under this clause or entitle the Contractor to an equitable adjustment hereunder.

11.2.2 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.

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 (hereinafter the "Cost of the Work") plus a fixed amount to be agreed upon to cover the cost of general overhead and profit (hereinafter the "Contractor's Fee").

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 may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

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 may include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, 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 in writing.

11.4.2 Cost of all materials and equipment furnished and incorporated in the Work.

11.4.2.1 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, the 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 Work shall be determined in accordance with paragraphs 11.4 and 11.5. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

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 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 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 provided in subparagraph 11.4.1).

11.5.5 Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective work, disposal of materials or equipment wrongly supplied and making good any damage to property.

11.6 The Contractor's Fee which shall be allowed to Contractor for his overhead and profit shall be a mutually acceptable firm fixed price; or, if none can be agreed upon, 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, the Contractor will submit in a form prescribed by Engineer an itemized cost breakdown together with supporting data.

11.9 Claims For Delay Due To Change: No claim for delay damages will be allowed the Contractor on account of change orders executed by him. In support of this stipulation the following language will be set out on the face of each change order:

"It is further understood and agreed that this modification constitutes payment in full on behalf of the Contractor and its Subcontractors and suppliers for all costs and markups directly or indirectly attributable to the change order herein, for all delays related thereto, and for performance of the changes within the time frame stated."

11.10 Allowances: It is understood that the Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such material men, suppliers or Subcontractors and for such sums within the limit of the allowances as the Engineer may approve. Upon final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. The Contractor agrees that the original Contract Price includes such sums as he deems proper for costs and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be allowed.

11.10.1 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.

11.10.2 The Contractor's costs for unloading and handling on the 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.

11.10.3 Whenever the cost, as described in 11.10.1 above, is more than or less than the allowance, the Contract Price shall be adjusted accordingly by Change Order.

ARTICLE 12 - CHANGE OF THE CONTRACT TIME

12.1 The Contract Time may be changed only 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 10 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 20 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.

12.3. Such delays may include, but not be restricted to, acts or neglect by any other contractor employed by Owner, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

12.4 No claim for delay shall be allowed because of failure to furnish Drawings until two weeks after written demand for such Drawings and not then unless such claim be reasonable.

ARTICLE 13 - GUARANTEE

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. Where equipment is required to have a longer guarantee time period by other section of these specifications, such longer guarantee time period shall govern. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other Work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Payment Bond and Performance Bond shall remain in full force and effect through the guarantee period.

13.2 Neither the final payment nor any provision in the Contract nor partial or entire use of the facilities by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship.

ARTICLE 14 - PAYMENTS AND COMPLETION

Payments to Contractor:

14.1 At least 10 days before each progress payment falls due (but not more often than once a month), the Contractor will submit to the Engineer an Application for

Payment filled out and signed by the Contractor covering the Work performed during the period covered by the Application for Payment 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 the site or in an approved location, the Application for Payment shall also be accompanied by such supporting data, satisfactory to the Owner, as will establish the Owner's title to the material and equipment and protect his interest therein, including applicable insurance. The Owner may retain 5 percent of the amount of each payment until the work is at least 50 percent complete, on schedule and satisfactory in the Engineer's opinion, at which time 50 percent of the retainage held to date shall be returned to the Contractor for distribution to the appropriate subcontractors and suppliers. Future retainage shall be withheld at the rate of 2-1/2 percent. On completion and acceptance of a part of the Work on which the price is stated separately in the Contract Documents, payment may be made in full, including retainage percentages, less authorized deductions. The Owner may reinstate up to 5 percent withholding if the Owner determines, at his 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 will, within 10 days after receipt of each Application for Payment, either indicate in writing his recommendation for payment and present the Application to the Owner, or return the Application to the Contractor indicating in writing his reasons for refusing to recommend payment. In the latter case, the Contractor may make the necessary corrections and resubmit the Application. The Owner will, within 21 days of presentation to him of an Application for Payment, pay the Contractor the amount recommended by the Engineer.

14.4 The Engineer's recommendation for 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 for 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 requested. However, by recommending 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.

14.5 The Contractor shall make the following certifications on each request for payment (Partial Payment Estimate):

14.5.1 I hereby certify that the work covered by this request for payment has been completed in accordance with the Contract Documents and that the labor and materials listed hereon have 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 that 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.

14.6 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, or, because of subsequently discovered evidence or the results of subsequent inspection of 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 requested 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.

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 an 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 the 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 will issue a certificate that the work is in substantial conformance with Contract Documents, recommending Final Acceptance by the Owner and Final Payment. 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 30 days of Final Acceptance of the Work.

14.10 The Contractor will indemnify and save the Owner and the Engineer harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the 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 Contract Price 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, his Surety, or any third party. In paying any unpaid bills of 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.

14.11 The date of beginning and the time for completion of the work are essential conditions of the Contract Documents and the Work embraced shall be commenced on a date specified in the Notice to Proceed.

14.11.1 The Contractor will proceed with the work at such rate of progress to insure full completion for Acceptance within the Contract Time. It is expressly understood and agreed, by and between the Contractor and Owner, that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

14.11.2 If the Contractor should fail to complete the work within the Contract Time, or extension of time granted by the Owner, the Contractor will pay to the Owner the amount for liquidated damages as specified in the bid for each calendar day or working day (as specified) that the Contractor shall be in default after the time stipulated in the contract documents.

14.11.3 The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following, and the Contractor has promptly given written notice of such delay to the Owner or Engineer:

14.11.3.1 To any preference, priority or allocation order duly issued by Owner.

14.11.3.2 To unforeseeable causes beyond the control and without the fault or negligence of the contractor, including but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, abnormal floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

14.11.3.3 To any delays of Subcontractors occasioned by any of the causes specified in the above paragraphs.

14.11.4 Requests by the Contractor for time extensions due to abnormally bad weather shall also consider time gained due to abnormally good weather during the contract period.

Acceptance of Final Payment as Release:

14.12 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all 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 Payment Bond and Performance Bond.

Final payment to the Contractor by the Owner shall not be made until the Contractor has obtained written consent from the Surety.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work:

15.1 The Owner may suspend the Work or a portion thereof by notice in writing to the Contractor. The Contractor may 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, provided the Contractor does not concur in the work suspension.

15.1.1 Should the Owner be prevented or enjoined from proceeding with Work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine to compensate for time lost by such delay with such determination to be set forth in writing.

Owner May Terminate:

15.2 If the Contractor is adjudged as 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 7 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 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.

15.3 Where the Contractor's services have been so terminated by the Owner, said termination 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.

15.4 Upon 7 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:

15.5 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 within 30 days, 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.

ARTICLE 16 - MISCELLANEOUS

16.1 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.

16.2 The successful Bidder shall be furnished one (1) electronic set of construction plans and specifications for use in the work. Any other plans and specifications needed shall be supplied upon payment of the amount specified for specs/plans on our Cook Coggin Planroom (www.cceplanroom.com).

16.3 The duties and obligations imposed by these General Conditions, and other Conditions and the rights and remedies available hereunder, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by paragraph 13.1 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 to them which are otherwise imposed or available by law, by special guarantee or by other provisions of the Contract Documents.

16.4 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 employees 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.

16.5 The Contract Documents shall be governed by the law of the place of the Project.

16.6 Attorney Fees - In the event it shall be necessary for either party to retain legal counsel to resolve a dispute or to enforce any of its rights hereunder, the party prevailing upon resolution of such disputes or enforcements of such rights shall be entitled to recover payment of all reasonable attorney's fees, expenses and costs incurred therewith.

ARTICLE 17 - ARBITRATION

17.1 All claims, disputes and other matters in question arising out of, or related to, this Agreement or the breach thereof except for claims which have been waived by the making or acceptance of final payment, shall be decided by arbitration, if all parties mutually agree, in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining, or in a court of competent jurisdiction. This agreement so to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof. The arbitration decision must present findings of fact, conclusions of law, basis of award and rationale.

17.2 Notice of the request for arbitration shall be filed in writing with the other party to the Agreement and with the American Arbitration Association, if both parties mutually agree to arbitration, and a copy shall be filed with the ENGINEER. The request for arbitration shall be made within the 30-day period where applicable, and in all other cases within a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall it be made after institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

17.3 The CONTRACTOR will carry on the Work and maintain the progress schedule during any arbitration proceedings, unless otherwise agreed by him and the OWNER in writing.

Mandatory Addendum to
All City of Tupelo Contracts
August 2019

The City of Tupelo (TUPELO), despite any contrary provision contained in any contract to which TUPELO is a party, does not waive any rights, benefits, or prohibitions that may be provided under any law, statute(s), regulation(s), or policies. All provisions to the contrary in any contract to which TUPELO is a party are hereby null, void and deleted. Not intended to be an exhaustive list, the following are examples of such matters and shall be exceptions to any contrary provision(s) in any contract to which TUPELO is a party.

1. TUPELO does not indemnify or hold harmless any party.
Miss. Const. Art. 4, § 100; Miss AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
2. TUPELO does not make any warranty.
Miss. Const. Art. 4, § 100; Miss AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
3. TUPELO does not waive any claim; past, present, or future.
Miss. Const. Art. 4, § 100; Miss AG Op; Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
4. TUPELO does not waive its sovereign immunity. TUPELO shall only be responsible for liability resulting from the actions of its officers, agents, and employees acting within the course and scope of their official duties.
Miss. Code Ann. § 11-46-1, et seq.
5. TUPELO does not waive its Constitutional Eleventh (11th) Amendment immunity.
U.S. Const. Amend. XI.
6. TUPELO does not agree to the application of laws of another state.
U.S. Const. amend XI; Miss. Code Ann. 11-11-3; Miss. Code Ann. 11-45-1; *City of Jackson v. Wallace*, 196 So. 223 (1940)
7. TUPELO does not limit the tort liability of another party to the amount of the contract or to any other set amount.
Miss. Const. Art. 4, § 100; Miss AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002); Miss. AG Op., Hathorn (May 28, 1992); Miss. AG Op., Davis (March 3, 1993).
8. TUPELO does not agree to waive warranties of merchantability, fitness for a particular purpose, or any common law warranties to which TUPELO is entitled.
Miss. Const. Art 4, § 100; Miss Code Ann. § 75-2-719; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).

9. TUPELO does not agree that a party may represent, prosecute or defend legal actions in the name of TUPELO. (CITATION NEEDED.)
10. Provisions that limit the time for TUPELO to pursue legal actions are deleted and void.
Miss. Const. Art. 4, § 104; Miss. Const. Art. 4, § 100; Miss Code Ann. § 15-1-5; Miss AG Op; Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
11. TUPELO does not agree to submit to binding arbitration.
Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).
12. TUPELO will make payments for all amounts owed under a contract agreement in accordance with state law.
Miss. Code Ann. § 31-7-305.
13. TUPELO advises for all contracts entered into, the provisions of the contract which will contain the commodities purchased or the personal or professional services provided, the price to be paid, and the term of the contract shall not be deemed to be a trade secret or confidential commercial or financial information, and shall be available for examination, copying or reproduction.
Miss. Code § 25-61-9 (7).
14. TUPELO must comply with Mississippi public records law. Records furnished to public bodies by third parties which contain trade secrets or confidential commercial or financial information shall not be subject to inspection, examination, copying or reproduction until notice to said third parties has been given, but such records shall be released within a reasonable period of time unless the said third parties shall have obtained a court order protecting such records as confidential.
Miss. Code § 25-61-9 (1).
15. Data processing software obtained by TUPELO under a licensing agreement that prohibits its disclosure and which software is a trade secret as defined in Miss. Code Section 75-26-3, and data processing software produced by a public body which is sensitive must not be subject to inspection, copying or reproduction under Mississippi public records law. "Sensitive" means only those portions of data processing software, including the specifications and documentation, used to:
(a) Collect, process, store, and retrieve information which is exempt; (b) Control and direct access authorizations and security measures for automated systems; (c) Collect, process, store, and retrieve information disclosure of which would require a significant intrusion into the business of the public body.

16. TUPELO is prohibited from binding its successors in office to contracts, including leases, which result in taking away the successors' rights and powers conferred by law, unless there is specific statutory authority to enter into such contract. In the absence of specific statutory authority, such contracts are voidable by the successors in office.
MS AG Ops., Barton (January 8, 2014) and Barton (July 15, 2011)(both relying on Biloxi Firefighters Assoc. v. City of Biloxi, 810 So.2d 589 (Miss. 2002).
17. TUPELO does not have the power to grant to any person, firm or corporation any exclusive franchise or any exclusive right to use or occupy the streets, highways, bridges, or public places in such municipality for any purpose. TUPELO cannot grant, renew, or extend any such franchise, privilege or right, without compensation or for any longer period than twenty-five years.
Miss. Code Anno. 21-27-1
18. All contracts must be approved by the City Council of TUPELO, subject to the veto power of the Mayor of TUPELO.
MS AG Ops. 2012-00013

SUPPLEMENTAL GENERAL CONDITIONS

These Supplemental General Conditions shall take precedence over the General Conditions if there are conflicting statements between the two.

1. SPECIFICATIONS If referred to on the drawings or in the specifications, the "Mississippi Standard Specifications for State Aid Road and Bridge Construction", as issued by the "Office of State Aid Road Construction of the Mississippi Department of Transportation", Latest Edition, and any issued addenda, shall be made a part of these specifications as if attached hereto.

If referred to on the drawings or in the specifications, the "Mississippi Standard Specifications for Road and Bridge Construction", as issued by the "Mississippi Department of Transportation", Latest Edition, and any issued addenda, shall be made a part of these specifications as if attached hereto.

2. PAYMENTS TO SUBCONTRACTORS Each month, attached to the contractor's pay request, shall be certification verifying that payment has been made to his subcontractor's. Failure of the contractor to make payment to his subcontractors will result in a delay in payment to the contractor until this problem is remedied.

3. STORM WATER POLLUTION PREVENTION This item is addressed in the Instructions For Bidders section of these Contract Documents.

4. MAINTENANCE OF TRAFFIC It is the Contractor's responsibility to provide the required Maintenance of Traffic in and around the construction area for the protection of the public. Warning signs, barricades, cones, barrels, flagmen, etc., shall be used as needed and as required by the M.U.T.C.D., latest edition. There will be no separate payment for Maintenance of Traffic, as this is considered incidental to the work.

5. CONSTRUCTION STAKING Bench marks and control points are indicated on the plans. It is the responsibility of the Contractor to provide all construction staking required for the construction of this project in compliance with the plans and specifications.

WEATHER DELAYS

PART 1 GENERAL

1.1 EXTENSIONS OF CONTRACT TIME

- A. If the basis exists for an extension of time, an extension of time on the basis of weather may be granted only for the number of Weather Delay Days in excess of the number of days listed as the Standard Baseline for that month.

1.2 STANDARD BASELINE FOR AVERAGE CLIMATIC RANGE

- A. The Owner has reviewed weather data available from the National Oceanic and Atmospheric Administration and determined a Standard Baseline of average climatic range for the project area.
- B. Standard Baseline shall be regarded as the normal and anticipatable number of calendar days for each month during which construction activity shall be expected to be prevented and suspended by cause of adverse weather. Suspension of construction activity for the number of days each month as listed in the Standard Baseline is included in the Work and is not eligible for extension of Contract Time.
- C. Standard Baseline is as follows:

<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
12	10	8	8	8	7	7	5	6	6	8	12

1.3 ADVERSE WEATHER AND WEATHER DELAY DAYS

- A. Adverse Weather is defined as the occurrence of one or more of the following conditions which prevents exterior construction activity or access to the site within twenty-four (24) hours:
1. precipitation (rain, snow, or ice) in excess of one-tenth inch (0.10") liquid measure
 2. temperatures which do not rise above 32 degrees F by 10:00 a.m.
 3. standing snow in excess of one inch (1.00")
- B. Adverse Weather may include, if appropriate, "dry-out" or "mud" days:

1. for rain days above the standard baseline;
 2. only if there is a hindrance to site access or sitework, such as excavation, backfill, and footings and the Contractor has taken all reasonable accommodations to avoid such hindrance; and,
 3. at a rate no greater than 1 make-up day for each day or consecutive days of precipitation beyond the standard baseline that total 1.0 inch or more, liquid measure, unless specifically recommended otherwise by the Designer.
- C. A Weather Delay Day may be counted if adverse weather prevents work on the project for fifty percent (50%) or more of the contractor's scheduled work day, including a weekend day or holiday if the Contractor has scheduled construction activity that day and has provided the Engineer Written notice of his intent in advance. The Contractors written notice of intent for scheduling shall be provided to the Engineer a minimum of 14 calendar days prior to the proposed work in order to be eligible for consideration in weather delay days.
- D. Contractor shall take into account that certain construction activities are more affected by adverse weather and seasonal conditions than other activities, and that "dry-out" or "mud" days are not eligible to be counted as a Weather Delay Day until the standard baseline is exceeded. Hence, the Contractor should allow for an appropriate number of additional days associated with the Standard Baseline days in which applicable construction activities are expected to be prevented and suspended.

1.4 DOCUMENTATION AND SUBMITTALS

A. WEATHER DELAY REPORT:

Use a copy of the following Weather Delay Report, indicating for each calendar month the days on which construction activity affecting the critical path of the Work was prevented by weather conditions. Mark the column for the general cause; and, under "Specifics", indicate corresponding measurement of precipitation, temperature, wind, or other influencing factors, and the construction activity that was scheduled and delayed. At the end of the month, add up the number of days delay, subtract the baseline number given in Paragraph 1.02 (C.), and show the resulting claimable days. Submit a copy of the completed report with the next application for payment and with subsequent claim for time extension. Claims for time extension based upon weather delays will be denied if a submitted report does not corroborate the claim or if no report was submitted when it was required in accordance with this paragraph.

- B. Submit daily jobsite work logs showing which and to what extent construction activities have been affected by weather on a monthly basis.
- C. Submit actual weather data to support claim for time extension obtained from nearest NOAA weather station or other independently verified source approved by Designer at beginning of project.
- D. Use Standard Baseline data provided in this Section when documenting actual delays due to weather in excess of the average climatic range.
- E. Organize claim and documentation to facilitate evaluation on a basis of calendar month periods, and submit in accordance with the procedures for Claims established in the General Conditions.

WEATHER DELAY REPORT

Project Number:		Month and Year Reported Below:
Project Name:		
Date	Weather Condition Causing Delay	Specifics – Identify work scheduled; Include measurement of precipitation, temperature, wind, etc.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
		Total number of days this month with delay due to weather:
		Standard Baseline number of days:
		Total – Baseline = Claimable Days:

TEMPORARY SILT FENCE

PART 1. GENERAL

1.01 SCOPE OF WORK

- A. This work under this item consists of furnishing, constructing and maintaining a water permeable filter type fence for the purpose of removing suspended soil particles from the water passing through it in accordance with the drawings and these specifications.
- B. The work shall include the removal of temporary fencing.

PART 2. MATERIALS

2.01 GEOTEXTILE FABRIC

- A. Geotextile Fabric may be woven or non-woven consisting only of long chain polymeric yarns or filaments formed into a stable network such that the fibers retain their relative position. The fabric shall be mildew resistant and inert to biological degradation and naturally encountered chemicals, alkalis and acids.
- B. The fabric shall contain stabilizers and/or inhibitors to make it resistant to deterioration from direct sunlight, ultraviolet rays and heat. The fabric edges shall be finished in such a manner to prevent raveling.
- C. The fabric shall be furnished in widths of not less than 36 inches.
- D. The fabric shall conform to the physical requirements of the Mississippi Standard Specifications for Road and Bridge Construction, 714.13.11-Table 1 Type II (90 lb Tensile Strength).

2.02 FENCE POSTS

- A. Fence posts shall be steel tee posts, 5 feet long, approximately 1 3/8 inches by 1 3/8 inches, 1/8 inch thick and with a nominal weight of 1.33 pounds per foot. The posts shall have notches or hole for fastening the fabric to the posts.

PART 3. EXECUTION

3.01 CONSTRUCTION

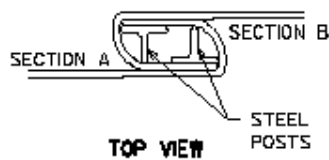
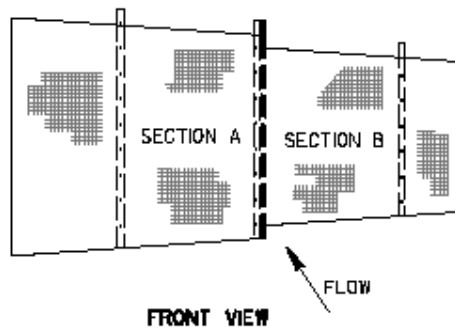
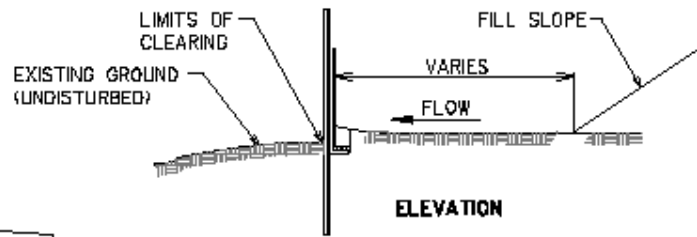
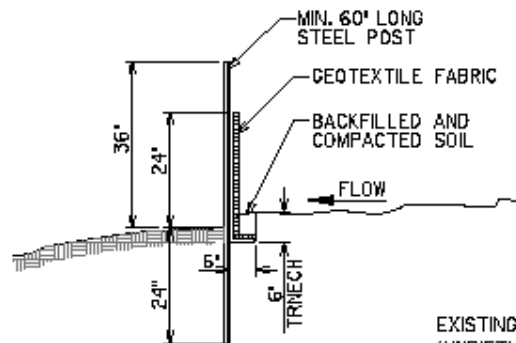
- A. The silt fence shall be constructed at the locations shown on the drawings or as directed. Posts shall be driven such that not more than 3 feet will protrude above ground. Posts shall be installed at not more than 6 feet apart. Fabric shall be attached to the posts with clips or other approved means. The bottom edge of the fabric shall be turned under 6 inches and buried 6 inches below the ground surface. The 6 inch by 6 inch trench shall be back-filled and tamped after fabric burial.

3.02 MAINTENANCE AND REMOVAL

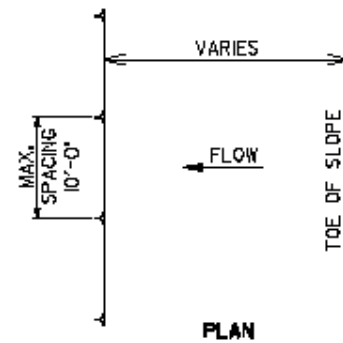
- A. The Contractor shall maintain the silt fence removing and replacing fabric which has deteriorated to the extent that it has become ineffective. Excessive accumulations of soil against the fence shall be removed. Maintenance will not be a separate pay item.
- B. Unless otherwise directed, all temporary silt fence shall be removed. Upon removal, the silt accumulations shall be removed, the area shall be dressed, and erosion control measures applied to all bare areas. The fence materials will remain the property of the Contractor.

3.03 BASIS OF PAYMENT

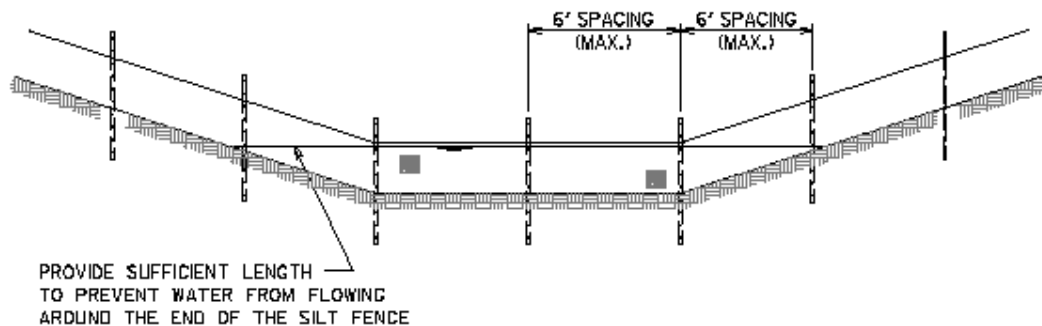
- A. The following Basis of Payment will apply to Unit Price Contracts only. **Where work under this division is a part of Lump Sum Item or Lump Sum Contract, the Basis of Payments will not apply.**
- B. Measurement and payment for Temporary Silt Fence will be made only when a pay item is included in the Bid Form. The quantities are estimated for bidding purpose only and may vary due to field conditions during construction.
- C. Temporary Silt Fence will be paid for at the Contract unit price per linear foot actually installed which shall be full compensation for the construction, maintenance and removal of the temporary silt fence.



**JOINING TWO ADJACENT
SILT FENCE SECTIONS**



**SILT FENCE INSTALLATION
IN A TOE OF SLOPE**



SILT FENCE INSTALLATION IN A DRAINAGE DITCH

NOTE: USE DRAINAGE DITCH INSTALLATION FOR LOW FLOW CONDITIONS ONLY WHEN SHOWN ON THE DRAWINGS

MOBILIZATION

1. SCOPE

Mobilization shall consist of moving all labor, equipment, supplies, and incidentals to the project site and removing same after all the work under the contract has been completed. It shall also include all mobilization pre-construction costs which are necessary direct costs to the project and are of a general nature rather than directly attributable to other pay items.

2. COMPENSATION

Measurement for payment will be in accordance with the following schedule:

1. When five percent (5%) of the original contract amount is earned from other bid items (exclusive of those listed as dependent items), fifty percent (50%) of the amount of the bid for mobilization, or five percent (5%) of the original contract amount, whichever is lesser, will be paid.

2. When ten percent (10%) of the original contract amount is earned from other bid items (exclusive of those listed as dependent items), one hundred percent (100%) of the amount of the bid for mobilization, or ten percent (10%) of the original contract amount, whichever is lesser, will be paid.

3. Upon completion of the work, payment of any amount of bid for mobilization that is outstanding will be paid.

3. BASIS OF PAYMENT

Mobilization will be paid for at the contract lump sum price, which shall be full compensation for completing the work specified.

ELECTRICAL WORK

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. This section includes all items necessary for and incidental to the execution and completion of a complete and operative electrical system for lighting and power, and of miscellaneous systems and equipment, all as indicated on all the drawings and as specified in all sections herein.
- B. The CONTRACTOR (as defined in General Conditions) typically elects to have an Electrical Subcontractor (see Subcontractor in the General Conditions) to execute this work. The General Conditions define their contractual roles. The following assumes that a Electrical subcontractor is executing this work for the CONTRACTOR, if not then all mentions of Electrical Subcontractor become the CONTRACTOR.
- C. The Electrical Subcontractor is encouraged to read "Concerning Subcontractors:" beginning with Article 6.10 in the General Conditions.

1.02 REFERENCE

- A. This scope of work shall be conducted as directed by the CONTRACTOR the Sequence of Operations section of these specifications and Article 6 of the General Conditions.

1.03 GENERAL

- A. The Electrical Subcontractor shall provide all supervision, labor, material, tools, equipment, supplies, items, articles and conduct or perform into operation satisfactory to the Owner the system described herein and shown or reasonably implied on the plans. Such work to be performed shall be installed or otherwise modified in accordance with local and national electrical codes—whichever are more restrictive.
- B. Electric service shall be as shown on the plans.
- C. The CONTRACTOR shall obtain and pay for all permits and all fees required of him to prosecute the work hereunder, including any services furnished or installed by utility companies.
- D. The Electrical Subcontractor shall obtain from the Utility details of service and metering equipment furnished and the extent of the work performed by the Utility. He shall provide such other equipment and perform such other work as

required to connect electric service. The CONTRACTOR shall make the necessary arrangements with and pay the fees required by the Utility to activate the service. He shall follow the Utility regulations and obtain its approval of the applicable portions of the work.

- E. The Electrical Subcontractor shall provide, weather heads, meter base, wiring and conduits to provide service to the various electrical components as required. Mount and connect all electrical components supplied under other sections of these specifications. Furnish all relays, etc. required to provide a complete system.
- F. The CONTRACTOR shall pay all bills for power used until, in the opinion of the Engineers, his contract is substantially complete, and at which time the Owner will begin paying the power bills.
- G. The CONTRACTOR shall furnish the Owner with Certificate of Inspection from all authorities having jurisdiction.
- H. The CONTRACTOR shall guarantee workmanship or materials covered by these specifications proves defective from one year of the Substantial Completion. He shall make such defects good without charges. This guarantee is to include everything except lamps for light fixtures.
- I. The Electrical Subcontractor shall furnish and install instrumentation conduit and wiring with plastic clip-on wire numbers corresponding with instrumentation numbering.
- J. The Electrical Subcontractor shall visit the site and familiarize himself with existing conditions. No allowances will be made for lack of knowledge of existing conditions. All distances indicated on the drawings shall be verified at the site.
- K. The Electrical Subcontractor shall co-operate with all other subcontractors on the project and shall install his work as fast as the progress of the balance of the work will permit.
- L. The Electrical Subcontractor shall do all cutting and repairing of walls, floors, and ceilings necessary for the installation of his work, but no cutting of work of other Contractors will be permitted without the consent of the Engineer or his representative.
- M. All cutting and repairing of walls, floors and ceilings shall be subject to the supervision and approval of the CONTRACTOR.
- N. The Electrical Subcontractor shall keep the buildings clean of his own rubbish

and scrap materials at all times.

- O. It is the responsibility of the Electrical Subcontractor to protect each piece of equipment during the course of construction.
- P. The Electrical Subcontractor shall make arrangement for storage of materials at the site.
- Q. The Electrical Subcontractor shall supply power circuits with breakers in motor control centers to all control panels supplied by equipment suppliers. He is not to furnish starters, relays, controls, etc. required to make equipment function in these control panels. But he shall mount and connect all panels and electrical hardware furnished by equipment suppliers.
- R. Related Work Not Included In This Division: Process piping, air piping, installation of items in process pipelines.

1.04 DRAWINGS

- A. The drawings and specifications shall be considered as supplementary, one to the other, so that materials and workmanship indicated, called for, or implied by one and not by the other shall be supplied and installed as though specifically called for by both.
- B. The drawings indicate the extent and general arrangement of the various systems. If any departures from these drawings are deemed necessary by the CONTRACTOR and/or Electrical Subcontractor, detailed drawings and descriptions of these departures and a statement of the reasons therefore shall be submitted to the Engineers for approval as soon as practicable. No departures from the arrangements shown on the drawings shall be made without the prior written approval of the Engineer.
- C. The drawings showing the extent and arrangement of the work of this particular trade must be used, together with the drawings showing the extent and arrangement of the work of other trades and shall be responsible for calling to the attention of the Engineers any interference encountered. Such interferences shall be investigated and called to the attention of the Engineer before any equipment is installed and before any material is fabricated. Relocation resulting from interferences shall be made at no additional cost to the Owner.
- D. Contract drawings are in part diagrammatic and are intended to convey the scope of work and indicate general arrangement of equipment, ducts, piping, conduit and approximate sizes and locations of equipment and outlets. Follow these drawings in laying out work. Consult general construction drawings for general conditions affecting this work, and verify spaces in which work will be installed.

Items not shown or specified which are required to produce a complete, operative and finished system shall be provided.

- E. The Contractor shall furnish As-built drawings at the completion of the job. Two complete sets of prints will be furnished the CONTRACTOR for indicating in yellow pencil the changes made in actual construction and installation. The actual location of all conduit systems and equipment installed by the Electrical Subcontractor shall be indicated so as to enable the Owner to properly operate, maintain, and repair both exposed and concealed work. These drawings shall be turned over to the Engineer at the completion of the work.

PART 2: MATERIALS

2.01 BASIC MATERIALS AND METHODS

- A. All material used in this work shall be new and bear the inspection label of the National Board of Fire Underwriters'. It is inferred that "or equal" follow all manufacturer's names.
- B. Prior to start of construction, and before any materials, fixtures, or equipment are purchased, the CONTRACTOR shall submit a complete list of materials, fixtures, and equipment to be incorporated in the work as detailed under "Shop Drawings and Samples" in the "General Conditions" section of the specifications.
- C. No consideration will be given to partial lists submitted from time to time. Approvals of materials will be based on manufacturer's published ratings. Any materials, fixtures, and equipment listed which are not in accordance with the specification requirements may be rejected by the Engineer shall then have the right to select materials, fixtures and equipment therefore.
- D. All work necessary to complete the work, as intended by the specifications shall be executed in the most thorough, neat and workmanlike manner.
- E. For all items of apparatus requiring maintenance, this CONTRACTOR shall furnish and deliver to the Owner's representative on the job, complete data as prepared by the manufacturer covering details of operation and maintenance.
- F. Loads shall be properly balanced on the phases of the system.

2.02 RACEWAY AND FITTINGS

- A. All electrical systems shall be installed in raceway unless otherwise noted.
- B. Raceway shall be as follows:

1. Electrical Service: 1. Underground, in Schedule 40 Gray PVC conduit, UL listed, with all bends and turn-ups into transformer pads and MCC's rigid steel conduit (GRSC) – OR - As shown on the contract drawings.
2. Branch and other Feeder circuits underground – Schedule-40 Gray PVC conduit, UL listed. For conduit runs longer than 100 feet bends shall be galvanized rigid steel conduit (GRSC).
3. Branch and feeder circuits outside and where in concrete—rigid aluminum conduit.
4. Branch and feeder circuits inside and exposed, or concealed above finished ceilings and in walls in buildings— rigid aluminum conduit.
5. Conduit for Instrumentation, Control and Monitoring wiring—rigid aluminum conduit outside buildings, exposed on inside walls and ceilings and in concrete; Electric metallic tubing in walls in buildings and concealed above finished ceilings; and PVC-coated galvanized rigid steel conduit underground. PVC-coated GRSC shall be verified by ETL PVC-001 Standard, verified with ASTM heat and humidity and H₂O submersion test. Both PVC coating and galvanizing shall be investigated by UL for corrosive purposes. Product shall be Robroy "Plastibond", Korkap, Permacoat, or equal meeting the ETL Standard. Couplings and Fittings for PVC-Coated conduit shall be from the same manufacturer as the conduit. The use of Plastic conduit for IC&M wiring is strictly forbidden.
6. Conduit for Variable Frequency Drives (VFD) – (drive to motor, or branch circuit to drive, if local) – rigid aluminum conduit above ground, PVC-Coated galvanized rigid steel conduit (GRSC) underground and where in concrete.
7. Conduit for Analog Signal Wiring - Concealed above finished ceilings and in walls in buildings: electric metal tubing (EMT). Exposed and outside: rigid aluminum conduit. Underground and where in concrete: PVC-Coated galvanized rigid steel conduit).
8. Conduit for Digital Signal Wiring - Concealed above finished ceilings and in walls in buildings: electric metal tubing (EMT). Exposed and outside: rigid aluminum conduit. Underground and where in concrete: PVC-Coated galvanized rigid steel conduit).
9. The contractor shall use strap wrenches on the installation of PVC-Coated conduit, in order to prevent or minimize damage to the conduit coating.
10. All empty conduits, except PVC-Coated GRSC, shall have a steel pull-wire installed in the conduit. Empty PVC-Coated GRSC conduits shall have a Nylon pull string installed.
11. All fittings, couplings, elbows, conduits, hubs, channels, clamps, straps, etc. shall be same material as conduit. Two-Hole conduit straps shall be used. The use of one-hole conduit straps is strictly **forbidden**.
12. When aluminum system components come into contact with dissimilar metals, keep the surfaces from direct contact by painting the dissimilar metal with a heavy coat of primer or asphalt paint. When aluminum components come in contact with concrete or lime mortar, paint the

aluminum surfaces, which would be in contact, with alkaline-resistant coatings such as heavy-bodied bituminous paint or water-white methacrylate lacquer.

13. Hubs shall have neoprene O-ring seal and grounding screw, Myers or equal. Double locknuts are not acceptable for connections to panels.
14. Connections with flex shall be Robroy or Sealtite with runs not to exceed 30 inches.
15. Instrumentation, Control and Monitoring wiring shall not be run in the same conduit with power wiring. Analog signal wire shall not be run in the same conduit with digital signal wire. Neither analog nor digital signal wire shall be run in the same conduit with power wiring.

C. No raceway shall be within the same ditch of any process piping.

2.03 WIRING

- A. Furnish and install a complete system of electrical wiring for lighting, control and power, including feeders, control panels, sub-feeders and branch circuits making proper connections to all switches, outlets, fixtures, equipment, panel boards, motor starters, etc. Wires shall be of the size indicated on the drawings, shown in the schedules, specified herein or as required by the NEC.
- B. Power wiring shall be copper of the size shown, No. 12 AWG minimum. Wiring shall be types THWN, THWN-2, XHHW and XHHW-2, except as otherwise specified herein or as noted on the plans. Conductor temperature rating shall not be less than 75 degrees Celsius. Wire size No. 10 and smaller, unless otherwise noted, may be solid. All other wire shall be stranded.
- C. Fixture wiring shall be temperature rated for the service.
- D. Provide control wiring as noted herein and as shown on the drawings, No. 14 AWG stranded minimum for contacts. Analog signal wire shall be No.18 minimum, Belden 8770 - 3 conductors, shielded, 18Ga with drain wire or equal.
- E. Provide grounding for entire electric installation as indicated on contract drawings and specified herein and as required in the NEC.

2.04 OUTLET BOXES

- A. At all outlets for electric lights, switches, wall receptacles, etc., outlet boxes and plaster rings, where required, shall be provided. Boxes and covers shall be in every instance of such form and dimensions as to be adapted for its specific use and locations, kind of fixtures to be used, and number, size and arrangement of conduits connecting thereto.

B. Outlet boxes for rigid conduit shall be Robroy, Plasti-Bond, or equal.

2.05 SECONDARY ELECTRICAL DISTRIBUTION SYSTEM

A. Service shall be as noted on contract drawings.

B. Feeders shall be cable in conduit.

C. Branch Circuits: Circuits shall be cable in conduit, exposed or concealed as indicated.

D. Multi-pole breakers shall be common trip.

E. Wiring Devices

1. Wall switches shall be furnished and installed where shown on the plans, except where otherwise noted or specified, they shall be single pole flush type, 15 ampere, totally enclosed. Switches shall be Hart and Hegeman #1891, 1892, or 1893, Hubbell or equal. Color of switches and faceplates shall be ivory.
2. Wall receptacles shall be furnished and installed where and as shown on the drawings and shall be H & H, Hubbell or equal.
3. Duplex convenience outlets shall be NEMA 5-20R, Hubbell #5352, H & H or equal. Duplex Ground Fault Circuit Interrupter (GFCI) receptacles shall be Hubbell #GFR5362, H & H or equal. Color to be ivory. Weatherproof outlets shall have cast aluminum; double lift cover plates, Crouse-Hinds WLRD-1 or equal.
4. Provide other receptacles or outlets as required by equipment served. Provide outlets, switches, etc. with steel cover plates. Ground receptacles to the conduit system.
5. Safety switches shall be Square D, or equal. Type Heavy Duty, or equal with voltage, amperage and poles required. They shall be NEMA-4 stainless steel.

F. Panelboards

1. Panelboards shall be furnished and installed where and as shown on the contract drawings. Panels shall have characteristics as indicated in schedules on the drawings. Panels shall be suitable for operation at the specified minimum short circuit ratings. Panels shall include circuit breakers manufactured by the same manufacturer as the panelboard.
2. Panel boards shall be Square D or equal complete with distribution circuit breakers and shall be dead front with copper terminals, copper busses, code gauge steel cabinets, trim and doors, door-in-door and surface mounted.
3. Branch circuit breakers shall have a short-circuit rating not less than the specified minimum short circuit rating of the Panel Main Circuit Breaker, or

in the case of Main-Lug-Only panels, the specified minimum short circuit rating of the panel, or as shown in the panel schedules on the contract drawings.

4. Panelboards shall have a Surge Protective Device (SPD) connected to its main busses via a branch circuit breaker. The SPD shall have characteristics as specified in the Surge Protective Device section of these Specifications.

2.06 LIGHTING FIXTURES

- A. At all outlets so indicated on the drawings the Electrical Contractor shall furnish and install lighting fixtures.
- B. All fixtures shall be completely wired and lamped.
- C. Fixtures of other manufacturers than those scheduled may be used if equal in design and appearance and if approved by the Engineer.
- D. Ballasts shall be electronic.
- E. Fixtures shall be as scheduled on the drawings.
- F. This Contractor shall furnish and install a complete set of Sylvania, General Electric, or equal lamps. Fluorescent lamps shall be cool white color. Lamps shall be in place and properly burning at the time of final acceptance. The 1year guarantee does not apply to lamps. Furnish the Owner with 10% in quantity of each type lamps for spares. Incandescent lamps shall be 130 volt.

2.07 HARDWARE

- A. The following statements apply to all areas of the project:
 1. All nuts, bolts, screws, etc., required for the installation of electrical work shall be stainless steel or cadmium plated.
 2. Conduit racks shall be aluminum, insulated from concrete surfaces with plastic or fiberglass.
 3. Conduit clamps shall be cast aluminum.

2.08 LINE HEATING ELEMENT

- A. Provide resistance type heating wire with thermostat, Chromalox, self-regulating SRL 5-1CT and SRL 5-2CT, or equal. Neatly spiral wire at 6" pitch or less. Set thermostat at 40°F. Provide a separate circuit, field installed, with circuit breaker; for each line heating element. Thermostat shall be Chromalox Series DL Model RTBC with sensitive bulb, or equal. Use DL-RTST Splice & Tee kit with grommets,

termination, cable connector and splice kits from the cable manufacture with fiberglass tape every 12" along pipe to install heat cable.

PART 3: EXECUTION

3.01 GENERAL

- A. Before final acceptance will be given by the Owner, the Contractor will be required to take such insulation, voltage, and load tests of all circuits as may be required and demonstrate definitely the satisfactory and the proper performance of each and every circuit. The Contractor shall provide the instruments required for these tests. Minimum tests required are:
 - 1. Insulation tests of all circuit, feeder wiring, including control wiring with witnessed written documents.
 - 2. System and component test runs for up to 48 hours continuously, or as deemed necessary to provide the capability of each component installed.
 - 3. Safety devices operation.
- B. If unsatisfactory materials, workmanship or performance are found, the Contractor shall remove such defective material or materials containing defective workmanship at his own expense and shall make appropriate replacements.
- C. All work is to be subject to constant supervision and final approval of the Engineers. Such final approval shall, in no way, relieve the Contractor of defects in workmanship or materials, which may be subsequently developed.

3.02 RACEWAY AND FITTINGS

- A. No raceway shall be within the same ditch of any process piping.
- B. All conduit shall be underground, surface mounted, embedded in concrete or walls or as noted on the plans. Most conduits on concrete structures should be run exposed along the outside wall or inside wall above the water line. Embedded going through structure walls above water line and where it interferes with personnel traffic. Embedded conduit in structures shall not be placed below the water line without the engineer's written approval.
- C. Exposed conduit shall be anchored at five-foot intervals with clamps of the same material as the conduit. The use of wire conduit anchoring is not acceptable.
- D. Where conduit groups are run together, the runs shall be neat and paralleled with true radii. Support groups on hot, dipped galvanized PVC-coated Uni-strut or equal. Slope conduits continuously toward boxes to drain properly and to avoid trapping condensate. Extend conduits from control center though pull and

junction boxes and panel boards, to the outlet boxes and bond the conduit with grounding lugs throughout so as to make each circuit continuous from service to outlet.

- E. Make bends true and even without kinks or flats. Make joints tight using approved couplings. Seal ends of all conduits during construction. All conduits shall be clean and dry when wire is pulled. Wire shall not be pulled when there is danger of water entering conduit. Conduit terminations in Motor Control Center panels, outdoor motors, and control panels shall be sealed for wiring and testing.
- F. Conduit in concrete or masonry shall be securely held in place during pouring and construction operations. Use templates to hold groups of conduits passing through walls or floors or terminating together.
- G. Provide pull and junction boxes where required for power, instrumentation, and security wiring. Boxes shall be cast aluminum or iron, PVC coated, with threaded hubs and with gasket watertight covers, joints or other openings. Boxes shall be adequately sized for the wiring splices and devices contained and shall be made up fully watertight. Anchor boxes securely and provide extension rings as required, Hoffman or Crouse-Hinds, NEMA-4. Other special pull or junction boxes may be shown on the contract drawings and shall be as described or specified on the drawings.
- H. Conduit terminations that run below grade shall be sealed with vapor seals in the conduit, above grade. Conduits that run from chemical areas to any other area shall be vapor-sealed on both ends, above grade.

3.03 WIRING

- A. Power wiring splices and taps for size 10 and smaller shall be twisted and soldered or by using approved twist or crimped connectors. On sizes No. 8 AWG and larger use lugs and bolted connectors and insulate with synthetic rubber and vinyl plastic tape or preformed boots.
- B. All outside connections to equipment shall be weatherproof or as required for the specific equipment furnished.
- C. Trades supplying electrically-operated equipment will furnish roughing-in dimensions. Set conduit and connection boxes to units only after receiving the dimensions and after verifying locations.
- D. Analog signal wire shall not be spliced.
- E. Digital signal wire shall not be spliced.

- F. Power and control wires shall be marked at both ends using plastic clip-on wire markers, Panduit or equal.

3.04 OUTLET BOXES

- A. Outlet boxes shall be firmly anchored in place and shall be provided with blank covers painted to match surroundings. Gang boxes and plates shall be used where more than 1 toggle switch or receptacle occurs.
- B. The approximate location of outlets, etc., is shown on the plans. The exact location shall be determined at the site. The right is reserved to change the exact location of any switch, ceiling or other outlet in any room before it is permanently installed. Unless otherwise directed, outlet boxes shall be placed with their centerline distance above the finished floor as indicated on the drawings.

3.05 SECONDARY ELECTRICAL DISTRIBUTION SYSTEM

- A. Panel Boards
 1. Provide a typewritten directory per schedule inside the panelboard door.
 2. Phase loads shall be arranged as shown on the plans, or nearly equal as possible, while maintaining balanced phase loads as much as possible.
 3. Circuit wiring entering and leaving panels shall be neatly arranged and shall be bundled and taped.
 4. Surge Protective Device wiring shall be kept to a minimum, with maximum length not exceeding 18 inches.
- B. Multi-wire homeruns shall have conductors connected to branch breakers of opposite polarity.

3.06 BASIS OF PAYMENT

- A. Where this item is a part of a Lump Sum item or Contract, this basis of payment does not apply.

Electrical Work will be paid for at the lump sum bid price. This price shall include all electrical distribution work as indicated on the construction drawings, materials and labor required for complete installation and ready for use.

An Electrical Utility Service Allowance in the amount listed on the Bid Schedule will be paid to the electrical service provider (**TUPELO WATER & LIGHT**) for establishing electrical service to the proposed site. Adjustments of this allowance to the actual construction cost incurred will be made by change order based on the cost invoiced to the Contractor by the electrical service provider.

SITE EARTHWORK

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. The work covered by this section of the specifications consists of the excavation of all materials encountered within the limits of the work, the formation of embankments with all or part of the excavated materials, or the disposal of all or part of the excavated materials off the project limits at a location provided by the contractor. If required, it may also consist of the formation of embankments with selected Borrow Materials. Excavation and the formation of embankments shall be performed as shown on the plans or as designated by the engineer. Excavation for storm sewers, structures, etc., is not excavation as defined in this specification and is not paid for separately.

PART 2: MATERIALS

2.01 SELECTED BORROW MATERIAL

- A. Selected Borrow Material shall conform to the Selected Borrow Material as specified in the "Granular Materials" specification.

PART 3: CONSTRUCTION

3.01 CONSTRUCTION STAKING

- A. Construction staking on this project shall be provided by the Contractor. If the Contractor desires to implement the use of machine controls during the site grading activities, the engineer will make available the site surface CADD 3-D model, being a CAD file containing only the existing and finish grade contours.

3.02 CLEARING AND GRUBBING

- A. Clearing and grubbing shall be performed as started in the "Clearing and Grubbing" specification.
- B. Any obstructions which are designated to be removed or are in the way of construction shall be removed prior to the start of excavation. The contractor shall inform himself as to the proper movements of haul and disposal of materials. All removed items shall be disposed of as stipulated in the Clearing and Grubbing specification.

3.03 UNCLASSIFIED EXCAVATION

- A. All excavated material, regardless of the type of material encountered, is defined as unclassified excavation and shall be included in the payments made under these specifications.
- B. Unclassified excavation will be used in the formation of embankments, unless indicated otherwise.
- C. Unclassified excavation, if not suitable or if not needed for embankments, shall be wasted on site or disposed of at a location off the project limits, provided by the owner. The disposal site shall be directly adjacent and accessible to the project site.
- D. Unclassified excavation used in the formation of embankments and pads, shall be placed in successive horizontal layers of not more than 8 inches in loose depth. The contractor shall route his equipment at all times over the layers so as to distribute evenly the travel over the entire width. Each lift shall be compacted to 95 percent standard proctor density within two percent of optimum moisture content. Required densities may be estimated on a 100'x100' grid for each lift layer. In addition to other compaction requirements, as construction progresses and embankments or fill are being formed, the site shall be proof rolled with a loaded dump truck weighing at least 25 tons to detect any soft or loose (weak) soils. Proof-rolling shall be performed in the presence of the Engineer or field technician working under the direction of the Engineer.
- E. The plans for this project will designate how the unclassified excavation is utilized.
- F. Any material encountered during the execution of the work that will not permit satisfactory compaction for sub grade, shall be excavated as designated and approved by the Engineer. This unsuitable material shall be understood to be any material which, at the proper moisture content, cannot be processed to the required density and stability. When this material is encountered, it (at the direction of the Engineer) shall be excavated, and disposed of off the project limits at a site provided by the contractor. There will be no separate payment for this excavation.

3.04 SELECTED BORROW MATERIAL

- A. When required by the plans, embankments and pads shall be formed of approved selected borrow material placed in successive horizontal layers of not more than 8 inches in loose depth for the full width of the cross-section. The contractor shall route his equipment at all times over the layers so as to distribute evenly the travel over the entire width. Each lift shall be compacted to 95 percent standard proctor density within two percent of optimum moisture content. Required densities may be estimated on a 100'x100' grid for each lift layer.

- B. As construction progresses and embankments or fill are being formed, the site shall be proof rolled with a loaded dump truck weighing at least 25 tons to detect any soft or loose (weak) soils. Proof-rolling shall be performed in the presence of the Geotechnical Engineer or field technician working under the direction of the Geotechnical Engineer.

3.05 TOPSOIL EXCAVATION

- A. Topsoil is defined on this project as all soft, wet, loose, organics, and other unsuitable miscellaneous materials remaining after site clearing operations. After all clearing operations on site and removal of trees, shrubs, bushes and other vegetation within the project area, topsoil material shall be removed from the project site to a depth up to 1 foot.

3.06 SUB GRADE PREPARATION

- A. The top portion of the sub grade, both cut and fill sections, shall be shaped correctly and brought to a firm, unyielding layer. The top six (6) inches under the base course shall be compacted to at least 95 percent standard proctor method density at optimum moisture content.
- B. Rolling and compaction of the entire area shall be done with equipment which will attain maximum results. Sheeps-foot, rubber-tired or flat rollers, or hand-tamping equipment shall be used as, in the opinion of the engineers, conditions require. Any portions of the area which are not accessible to a roller shall be compacted to the required density by other approved means.
- C. Any irregularities or depressions that develop under rolling shall be corrected by loosening the material at those places and adding, removing or replacing material until the surface is smooth and uniform. All soft and yielding material which will not compact readily when rolled or tamped shall be removed as directed by the engineers and replaced with a suitable material.
- D. During all compacting operations, the water content of the material shall be constantly adjusted, if necessary, by sprinkling or loosening and subsequent to within two (2) percent by weight of the optimum moisture content.
- E. At all times the top of the sub grade shall be kept in such condition that it will drain readily and effectively. The contractor shall protect the sub grade from the damage, and in no case will vehicles be allowed to travel in a single tract. If ruts are formed, the sub grade shall be reshaped and rolled.
- F. The top of the sub grade shall be of such smoothness that when tested, it shall not show any deviation in excess of one-half inch, nor shall it be more than 0.05 feet from the true established grade.

- G. All materials shall be hauled from the original position to waste or the final position as directed. All haul shall be "free-haul", and there shall be no separate payment for haul of materials.

3.07 METHOD OF MEASUREMENT

- A. The contractor must refer to the typical sections and grading plans provided for the proper construction of the project.
- B. All quantities indicated as "Plan Measure" will be paid for at the contract price bid per unit measured, taken from the theoretical volumes as calculated from the lines and grades on the plans. Plan Measure quantities will not be overrun or underrun unless the item has been affected by a related change order or a change to the lines and grades on the plans. Plan Measure quantities do not require field measurements; therefore, any potential payment discrepancies have to be based on field-verified survey data as provided by the contractor. Based on such field verifications approved by the Engineer, adjustments to Plan Measure quantities may be made.

3.08 BASIS OF PAYMENT

The following Basis of Payment will apply to Unit Price contracts only. Where any or all of these items are parts of a Lump Sum contract amount or item, the Basis of Payment will not apply.

- A. When, in opinion of the engineer, the Unclassified Excavation is completed according to the Plans and Specifications, Unclassified Excavation will be paid for at the contract price bid per Cubic Yard (Plan Measure), unless otherwise indicated, with no shrinkage factors or adjustments applied, which price shall be full compensation for the Excavation of all materials encountered, and for the formation of embankments with Excavated material.
- B. When topsoil excavation has been completed according to the plans and specs, for on-site material as directed by the Engineer, specified topsoil excavation will be paid for at the contract unit price bid per Cubic Yard (Plan Measure), with no shrinkage factors or adjustments applied.
- C. The payments for work under this specification shall include all materials, equipment, and labor for performing all items of work called for under this specification. **Where any or all of these items are parts of a Lump Sum contract amount or item, the Basis of Payment will not apply.**

Payment will be made under:

Unclassified Excavation (No Shrinkage) (Plan Measure) per Cubic Yard
Topsoil for slope treatment (On-site) (Plan Measure) per Cubic Yard

EROSION CONTROL

1. SCOPE

This item provides for the planting and establishment of vegetation for the purpose of controlling erosion and for enhancing the aesthetic value and functional usefulness of the completed project. After acceptance of the finish grading, the entire new soil surfaces and abraded areas shall be prepared, fertilized, seeded and mulched with vegetative material, or erosion control fabric, or excelsior blanket, or solid sodded excepting areas otherwise noted on plans.

It shall be understood that the term "plant establishment" means that work necessary to supplement and improve natural conditions to the end that fully established healthy vegetation is provided. It shall also include the preserving, protecting and replacing and such other work as may be necessary to keep the turf or sod in a satisfactory condition.

The term "seasonably dormant" shall be understood to mean that during the summer or winter season, a particular species of plant does not normally produce growth, but that the roots have taken hold in the soil sufficiently to be capable of growing off at the end of the dormant period.

2. LIMITATIONS

Normal erosion control establishment items will only be performed between March 1 and November 15. Mixture No. 1 will be used during the spring and summer months, March 1 to August 31, and Mixture No. 2 will be used during the fall and winter months, September 1 to November 15. The Contractor is with this forewarned that these are not arbitrary nor flexible dates and his adherence thereto is expected. At other times, temporary erosion control will be required.

3. MATERIALS

Fertilizers Fertilizers shall comply with the applicable fertilizer laws of the State. Combination fertilizer shall be "standard commercial products" and shall contain not less than 13% each Nitrogen, Phosphorous P 205 , and Potash K 20.

Agricultural limestone shall contain not less than 80% soluble of calcium and magnesium carbonate calculated as calcium carbonate on an oven dry basis. Agricultural limestone shall be of such a fineness that at least 80% will pass a U.S. Standard No.10 sieve ad 40% will pass a U.S. Standard No. 40 sieve.

Thirty-four percent ammonium nitrate fertilizer, a manufactured fertilizer, shall be a 34-0-0 grade containing a minimum of 34% total nitrogen, of which 17% shall be nitrate nitrogen and 17% shall be ammoniacal nitrogen.

Seed All seeds shall comply with the applicable seed laws of the State. The seeds shall be delivered in bags with certified tags or labels attached to each bag showing the name (kind and variety), percent of germination and purity of the seed and the percent of obnoxious weeds and inert matter.

The requirements for germination and purity shall be as set out in the table below:

GERMINATION AND PURITY REQUIREMENTS

Name (Kind)	Name (Variety)	Percent Germination	Percent Purity
<u>Normal Conditions</u>			
Bermudagrass	Common	90	95
White Clover	Dutch	85	98
Crimson Clover	Dixie, Chief, Tibee, Autauga	85	98
Bahiagrass	Pensacola Wilmington	85	85
Fescue	Kentucky 31	95	80
Sericea Lespedeza		98	90
<u>Temporary Control</u>			
Wheat	Mixed	80	98

Approved grass seeds shall be treated with a disinfectant protectant containing active ingredient of not less than 50% Thiram (tetraethylthiuram disulfide). The use of other approved dry (dust) treatment type disinfectant protectant materials for grass seeds may be permitted when the Contractor has furnished satisfactory evidence that Thiram is not available. The treatment shall be performed at the rate specified and according to the directions shown on the container for treatment of grass seeds.

Approved legume seeds shall be treated with leguminous inoculant. The inoculants for treating leguminous seeds shall be standard, pure culture of nitrogen fixing bacteria. The seed shall be treated at the rate specified and according to the directions shown on the container of the inoculants and before the expiration date for use of the inoculant as also shown on the container.

Water

All water used shall be free from injurious quantities of oil, acid, alkali, or vegetative matter; reasonably clear; and shall not be brackish. If at any time water from any source shall become of unsatisfactory quality of insufficient quantity, the Contractor shall provide satisfactory water from some other source.

Vegetative Materials for Mulch

much shall be classed as follows:

The vegetative materials for

Type I - Approved baled straw of wheat, oat, rye grain or rice; or broomsage of Bahia grass (without seed heads), which have reached maturity prior to cutting.

Type II - Approved baled hay produced from Bermuda, Bahia, Fescue, Dallas Grass, any of the Lespedezas, or combinations thereof.

All of the above materials shall have been cured properly prior to bailing and shall be reasonably free from Johnson Grass and other obnoxious grasses and weeds. Vegetative material shall be reasonably bright in color, dry, and shall not be musty, moldy or of otherwise low quality.

Type I shall be furnished and used unless written permission to use Type II is obtained.

Asphalt Emulsion Mulch Bituminous material for mulch shall be emulsified asphalt, Grade SS-1. Emulsified asphalt shall be homogeneous, showing no separation of asphalt (limits for settlement excepted) after thorough mixing, within 30 days after delivery. Emulsified asphalts which have been subjected to freezing temperatures while in storage shall be subjected to retest, and acceptance or rejection of the material shall be based on the results of such retest.

Erosion Control Fabric Erosion Control fabric shall consist of knitted construction of Polypropylene yarn with uniform openings interwoven with strips of biodegradable paper. The fabric shall weigh approximately 0.2 pounds per square yard and shall be furnished in 5' to 10' wide rolls of 360' length. Metal staples for securing the erosion control fabric in place shall be fabricated from 11 gauge wire and shall be "U" shaped with a 1-inch crown and legs 6 inches in length. Moisture proof 4 to 6 mil opaque polyethylene bags for protection of the erosion control fabric prior to installation shall be provided.

Excelsior Blanket The excelsior blanket shall consist of a machine-produced mat of interlocking wood excelsior with uniform thickness and the fiber evenly distributed over the entire area of the blanket. A fabric of either twisted paper cord, cotton cord or extruded plastic shall be applied to one side of the excelsior wood mat to hold the wood fibers in place. The stored blankets shall not be exposed to moisture prior to placing.

The blanket shall meet the following requirements:

Interlocking Wood Fibers	0.020" x 0.04" + 25%
50% must be 3 1/2" or longer	
Fabric Net	1 1/2" x 3 1/2" maximum mesh size
Roll Width	36" minimum

The staples shall be "U" shaped, made from 11 gage or heavier steel wire, width 1 or 2 inches at the throat and a minimum of 6 inches from top to bottom after bending.

Solid Sod

Furnish, transport and plant approved grass sod so as to provide a complete cover to solid sod turf with satisfactory growth on all areas shown on the plans or designated to be sodded solid. This work shall also include the accomplishment of plant establishment as required to assure satisfactory growth of the solid sod.

Unless otherwise specified, solid sod shall be bermudagrass (common), bahia or other approved sod species and shall be live, fresh, growing grass with at least 1 1/2 inches of soil adhering firmly to the roots when placed. 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 harmless when transplanted. The sod shall be in blocks at least 8" x 8" free from ragged edges.

The source of solid sod shall be inspected and approved prior to harvest for use on the project. After approval, the area from which the solid sod is to be harvested shall be closely mowed and raked if deemed necessary to remove excessive top growth and debris.

4. CONSTRUCTION REQUIREMENTS

Ground Preparation

Plow or disk-harrow and thoroughly pulverize to a depth of 4" the areas immediately before the application of vegetative items. The prepared seedbed must be in reasonably close conformity with the established lines and grades without appreciable humps or depressions. Do not attempt to prepare the soil while it is wet or is in otherwise nontillable condition. When the soil is too dry to allow proper tillage, water will be added to insure a tillable condition.

Fertilizing

Furnish all approved equipment necessary to handle, store, uniformly spread and incorporate the specified application of fertilizers, including agricultural limestone. The amounts and types of fertilizers shall be applied and incorporated uniformly in accordance with the requirements for the various items of use. If the fertilizer is not spread in such a manner as to result in the ordered amount, the Contractor shall be required to furnish and spread the original amount and type of fertilizer specified on deficient areas, at no additional cost to the Owner.

In the event fertilizer is to be applied to existing vegetated grass areas, incorporation, unless otherwise specified, shall be accomplished immediately after the fertilizer application by reducing the existing vegetation to a height of approximately 4 inches above the ground, in lieu of other methods of incorporation. Under such conditions, all fertilizer, except agricultural limestone, shall be applied without the use of slurry, hydroseeder or other wet methods and such fertilizers shall be of the granular or pellet type.

All fertilizer shall be incorporated as required within 24 hours following the approved spreading, or as directed.

Seeding

Prepare and fertilize the soil prior to planting the seeds. Sow treated seed uniformly over the entire area. This may necessitate seeds of different size to be sown separately.

No seeding will be permitted during windy weather or when the ground is frozen, extremely wet, or otherwise in an non-tillable condition.

Cover all seeds lightly with soil by raking, rolling or other approved methods, and compact the area as directed.

Mulching

Place mulch uniformly on designated areas within 24 hours following the planting of seeds. Begin placement on the windward side of areas and from top of slopes. In its final position, the mulch shall be loose enough to allow air to circulate but compact enough to shade the ground partially and reduce erosion.

Loosen and break the base material thoroughly before it is fed into the mulching machine to avoid placement of unbroken clumps. This machine shall be capable of maintaining a constant air stream which will apply controlled quantities of asphalt coated mulch in a uniform pattern.

The mulch may be anchored by either the use of a mulch stabilizer or by tacking with bituminous material. If asphalt is used, a jet or spray nozzle for applying uniform, controlled amounts of asphalt to the vegetative material as it is ejected shall be located at or near the discharge spout. Any property damage during this operation shall be the responsibility of the Contractor and he will repair or cause to be repaired any such damage at his expense.

Mulch stabilizers shall consist of dull blades or disks without camber and approximately 20 inches in diameter. The disks shall be notched, shall be spaced at approximately 8-inch intervals, and shall be equipped with scrapers. The stabilizer shall weight approximately 1000-1200 pounds, shall have a working width of no more than eight feet, and shall be equipped with a ballast compartment so that, when necessary, weight can be increased.

If a mulch stabilizer is used, the mulch shall be punched into the soil for a minimum depth of one inch. Where steep slopes or soil conditions are such that anchoring cannot be performed satisfactory with a mulch stabilizer the Engineer will require the bituminous material be applied at the time or immediately following the mulch placement. When mulch stabilizers are used, anchoring the mulch shall be performed along the contour of the ground surface.

The Contractor shall be responsible for maintaining and protecting mulched areas until final acceptance of the project. He shall take every precaution to prevent unnecessary foot and vehicular traffic and shall repair and restore immediately, without extra compensation, any displacement of mulch.

At the appropriate times, the Contractor shall mow all areas mulched, or otherwise remove or destroy all undesirable growth, to prevent competition with the desired planted materials and to prevent reseeding of all undesirable growth.

Erosion Control Fabric

Erosion control fabric may be used in lieu of asphalt straw mulch, at the contractor's option. During the installation, the erosion control fabric shall be draped loosely over the seeded area. Prepare the area to be covered as a fine seed bed, fertilized, limed and seeded prior to installation of erosion control fabric. If the slope is greater than 3:1, apply fabric vertically with paper strips oriented parallel to the slope.

Dig a 4 inch deep check slot 1 foot back from the slope crown; fold, place and staple fabric every 9 inches in the check slot and cover with soil. Repeat check slot at the bottom of the slope. When 2 or more lengths of fabric are required to be installed side-by-side to cover an area, they shall overlap 4 inches (minimum). Fabric lengths installed end-to-end shall overlap 4 inches (minimum) with the upgrade section on top of the lower grade section.

Staple each length of fabric in three rows; each edge and the center with staples placed on 3 foot centers (maximum). Overlap ends shall be stapled on 9 inch centers across the fabric overlap.

Maintain and protect the erosion control fabric until final acceptance or until the fabric has served its useful life, whichever occurs first. Maintenance shall consist of repairs made necessary by erosion, wind, fire or any other cause until final acceptance. Following the restoration of damage areas under plant establishment requirements for applicable underlying items, the fabric shall be repaired or replaced to meet the original requirements and maintained until final acceptance as provided herein.

Excelsior Blanket

The area(s) to be covered shall be prepared, fertilized and vegetated as specified in accordance with the requirements of the contract before the blankets are placed. Immediately following the planting operations, the blankets shall be laid evenly, smoothly and in contact with the soil throughout and with the fabric net on top of the blankets. The asphalt-coated mulch should be omitted from all area(s) receiving the Excelsior Blankets.

For waterways, the blanket shall be unrolled in the direction of water flow. When 2 or more strips are required to cover a ditch area, the edge(s) of adjacent strip(s) shall overlap a minimum of 6 inches. In case a strip is to be spliced lengthwise, the ends of the strips shall overlap 6 inches minimum with the upgrade section on top.

When used on slopes the blankets may be placed either horizontally or vertically to the slope with the edges and ends of adjacent strips lapped a minimum of 6 inches with the upslope strip on top.

Each strip shall be stapled in 3 rows (each edge and the center) with staples spaced not more than 4 feet longitudinally. When using 2 strips overlapped, use a common row of staples on the strips securing the netting of each strip. All end strips shall be stapled at 1 foot intervals at the end. Staples shall be firmly embedded in the underlying soil.

The Contractor shall maintain and protect the Excelsior Blankets until final acceptance or until the Engineer has determined that the blanket has served its useful life, whichever occurs first.

Maintenance shall consist of repairs made necessary by erosion, wind, fire or any other cause until final acceptance. Following the restoration of damaged areas under plant establishment requirements for applicable underlying items, the blanket shall be repaired or replaced to meet the original requirements and maintained until final acceptance as provided herein.

Watering Apply water in the amounts and at the times necessary to establish growth. Watering of plant life shall be done at night, during late afternoon or during the early morning hours.

Solid Sod Placement Use approved mechanical devices, such as sod cutters, for cutting the sod into strips or blocks.

All sod in stacks shall be kept moist and protected from exposure to the wind, sun and from freezing prior to transplanting. In no event shall more than 3 days elapse between the cutting and planting of the sod.

Prior to ground preparation for solid sodding upon all excavating, shaping and dressing shall have been completed in such a manner that the foundation for the sod will have the proper cross-section, line and grade and the sod, after placement, will be flush with or slightly below the adjacent final ground line.

Perform ground preparation after the area has been graded as required. Apply the specified amount of fertilizer uniformly and rake or harrow the surface lightly to incorporate it into the prepared soil. After acceptance of the prepared and fertilizer area, sodding shall follow immediately.

Place the sod with the edges in close contact, starting at the lowest point and working upward. Fill cracks between blocks of sod with small pieces of fresh sod. Compact and water and entire sodding area.

On areas on which the solid sodding might slide due to the height and slope of the surface or nature of the soil, use wooden pegs to hold the sod in place.

5. TEMPORARY EROSION CONTROL When normal erosion control measures must be delayed due to planting season limitations, temporary erosion control measures shall be applied. These shall consist of ground preparation, seeding with wheat, fertilizing, mulching and watering as herein specified. No limestone will be required for temporary control methods.

When the normal planting season arrives, the temporary control plant growth shall be cut and removed, the remaining roots disc-harrowed and the area treated with normal ground preparation procedures as herein specified. After this work, normal erosion control procedures will be followed.

6. PLANT ESTABLISHMENT The Contractor will be required to provide plant establishment on all areas where seeds or mixtures containing seeds for permanent vegetation is specified, until final acceptance of the project.

Plant establishment will be required for a minimum period of 90 calendar days after completion of seeding or sod placement. In the event satisfactory growth and coverage as specified below has not been provided in the above specified minimum period of time, plant establishment shall be continued, and final inspection will not be made until such specified growth and coverage is provided.

The Contractor shall water the grassed areas during such periods and as frequently as appropriate to promote maximum practicable growth.

The Contractor shall mow grassed areas as many times and in such a manner as may be deemed necessary to control obnoxious vegetation which competes with or shades the desirable grass. Such mowing shall be performed in a manner that will not cause unnecessary damage to desirable vegetation.

Reseeding or resodding may be required at any time on ares or portions of such areas which for any cause are deemed to be unsatisfactory. Except as otherwise specified or permitted, areas deemed to require reseeding shall be prepared, seeded, and all other items of work performed in accordance with the requirements of the contract as if such reseeding was the initial seeding. However, the type of fertilizer and the application rate of fertilizer to be furnished and applied by the Contractor shall be determined by soil tests or as otherwise established.

It shall be the Contractor's responsibility to provide satisfactory growth and coverage of the kinds of grasses or legumes, or a combination of both, produced from seeding as specified.

Growth and coverage on areas seeded as specified shall be considered to be in reasonably close conformity with the intent of the contract when the type of vegetation specified exclusive of that from seeds not expected to have germinated and shown growth at the time, has reached a point of maturity such that it has produced stems or runners which overlap adjacent similar growth in each direction over the entire area.

7. APPLICATION RATES The application rates shown in the following table are to be considered as minimum rates and the Contractor may use his discretion as to the use of any addition quantities keeping in mind that sufficient growth and establishment must be obtained.

MINIMUM APPLICATION RATES

Normal Conditions

Commercial Fertilizer (13:13:13)	1.0 tons per acre
Agricultural Limestone	2.0 tons per acre
Ammonium Nitrate (34:0:0)	500 lbs. per acre
Vegetative Mulch	2 tons per acre
Asphalt Emulsion for Mulch	100 gals. per ton Vegetative Mulch

Mixture No. 1

Bermudagrass Seed (Common)	45.0 lbs. per acre
White Clover Seed (Dutch)	20.0 lbs. per acre
Bahiagrass Seed (Pensacola, Wilmington)	30.0 lbs. per acre
Sericea Lespedeza	25.0 lbs. per acre

Mixture No. 2

Bermudagrass Seed (Common)	10 lbs. per acre
Bahiagrass (Pensacola, Wilmington)	30 lbs. per acre
Crimson Clover (Dixie, Chief, Tibbee, Autauga)	15 lbs. per acre
Fescue (Kentucky 31)	40 lbs. per acre

Temporary Control

Wheat Seed	180 lbs. per acre
Commercial Fertilizer (13:13:13)	0.5 ton per acre
Vegetative Mulch	2 tons per acre
Asphalt Emulsion for Mulch (if used)	100 gals. per ton Vegetative Mulch

8. BASIS OF PAYMENT Payment will be made at the contract unit price as follows. The pay items are:

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Agricultural Limestone - per ton
Commercial Fertilizer - (13:13:13) - per ton
Ammonium Nitrate - per lb
Seeding - per acre
Mulch-Vegetative Material - per ton
Erosion Control Fabric - per square yard
Excelsior Blanket - per square yard
Solid Sodding - per square yard

These payments shall be full compensation for ground preparation, for furnishing, spreading and incorporating fertilizer for the type and amount specified, for furnishing, applying and anchoring mulch for furnishing and placing erosion control fabric and/or excelsior blanket, for furnishing, inoculating, planting the seed, for furnishing and placing the solid sod, for watering and maintaining the work until final acceptance of the contract, and for furnishing all materials, equipment, tools, labor and incidentals necessary to complete the work.

Ground preparation will not be measured for payment. Such construction shall be considered a necessary part of the work in completing the various planting or seeding items and is a responsibility to be assumed by the Contractor in connection with such respective pay items.

There will be no payment for Temporary Control items.

Anchoring of vegetative mulch, whether by use of a mulch stabilizer or by application of bituminous material, will not be measured by separate payment. The cost of anchoring shall be absorbed in the prices bid for other items of work.

GEOTEXTILE FABRIC
FOR ROADWAY STABILIZATION

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. The work under this item shall consist of furnishing and placing Geotextile Fabric as shown on the plans and as designated in this specification.

PART 2: MATERIALS

2.01 GEOTEXTILE FABRIC

- A. The Geotextile Fabric shall conform to Type V as specified in Table I of SECTION S-714.13 - Geotextiles of the "Mississippi Standard Specifications for State Aid Road and Bridge Construction," latest edition.
- B. **The Geotextile Fabric shall be Non-Woven.**

PART 3: CONSTRUCTION

3.01 GEOTEXTILE FABRIC

- A. The placement of the Geotextile Fabric shall conform to the "Mississippi Standard Specifications for State Aid Road and Bridge Construction", latest edition.

3.02 METHOD OF MEASUREMENT

- A. The quantity of Geotextile Fabric to be paid for shall be measured by the following method. The area of coverage called for on the plans or as directed by the Engineer shall be field measured and the area of coverage, in square yards, without regard to laps, will be the quantity for payment. Any material placed contrary to direction will not be measured for payment.

3.03 BASIS OF PAYMENT

- A. The Geotextile Fabric will be paid for at the contract unit price bid, per square yard, for the amount placed as specified and approved. This payment shall be full compensation for furnishing all materials, labor, and incidentals for a completed product.

SIZE III STABILIZER AGGREGATE COURSE

1. SCOPE

This item shall consist of constructing one or more courses by the incorporation of stabilizer aggregate in accordance with these specifications and in reasonably close conformity with the lines, grades, and cross-sections shown on the plans or established by the Engineer.

The materials, composition, construction methods, inspection, testing, measurements, payment, and all other requirements for a satisfactory completed finished product shall meet the requirements of Section 310 and all other sections referenced by these sections of the "Mississippi Standard Specifications for Road and Bridge Construction", Latest Edition, as issued by the Mississippi Department of Transportation.

2. BASIS OF PAYMENT

Stabilizer aggregate will be paid for at the contract unit price per ton. The prices thus paid shall be full compensation for completing the work, including all materials, equipment and labor for performing all items of work called for under this specification.

Payment will be made under the following pay items:

Crushed Stone (Size III Stabilizer Coarse Aggregate) per Ton

MANHOLES

1. SCOPE OF WORK Furnish all materials and equipment and construct sanitary sewer manholes at the locations and to the grades designated.

2. MATERIALS Manhole barrels may be constructed of precast concrete manhole units or concrete poured-in-place, at the option of the Contractor. The bottom of all manholes shall be reinforced concrete.

Precast inverts are not allowed. Inverts must be field constructed.

Concrete construction shall conform to the specifications under the heading "Concrete and Reinforcing".

Plaster or grout shall be 1:2 mixture of patching material and sand.

Invert builder blocks shall be as manufactured by Fernco or equal.

Precast manhole units shall conform to ASTM Specification C-478. Test reports from an independent laboratory covering each piece used in the job shall be furnished at no expense to the Owner. Joints shall be formed with rubber gaskets or preformed joint compound.

Poured in place manholes shall be constructed using the materials and methods as outlined in the "Concrete and Reinforcing" specification as modified herein.

Rubber gaskets shall be "O"-Ring or flat ring as manufactured by Press Seal Gasket Corp., Fort Wayne, IN; Hamilton-Kent Manufacturing Co., or equal, and shall conform to the requirements of the latest edition of ASTM Designation C-443. Lubricants shall be as recommended by the gasket manufacturer.

Manhole pipe seal gaskets for precast manhole units shall be "Kor-N-Seal" as manufactured by Kor-N-Seal Co., Milford, NH ; "PSX" by Press-Seal Gasket Corp; or equal.

Preformed joint compound shall be "EZ Stik" as manufactured by Concrete Products Supply Co., Fort Wayne, IN; "Kent Seal No. 2"; or equal. Primer, when required for use with the preformed joint compound, shall be as recommended by the manufacturer of the preformed joint compound. Install joint compound according to the manufacturer's instruction.

Sealer compound shall be "Drycon" as manufactured by IPA Systems, Inc., Philadelphia, PA; Tamm's "Tamoseal"; or equal. **SEALER SHALL BE FIELD APPLIED AFTER CONSTRUCTION.**

Cold joint bonding agent shall be "Octoblen" as manufactured by IPA Systems, Inc., Philadelphia, PA; Tamm's "Tammsbond"; or equal.

Patching material shall be "Octocrete" as manufactured by IPA Systems, Inc., Philadelphia, PA; Tamm's "Speed Crete Blue Line"; or equal.

The manhole steps shall be made of injection molded copolymer polypropylene encapsulating a ½" diameter grade 60 steel reinforcing rod. The steps shall be of such cross-sectional area and configuration that they will withstand a single concentrated live load of 300 pounds. They shall be in conformance with ASTM Standard C-478. Manhole steps shall be as manufactured by M.A. Industries, Inc., Peachtree City, GA, or equal.

Manhole frames and covers shall be sound gray iron castings (ASTM A48 Class 35B). The castings shall be true to pattern, free from faults, sponginess, cracks, blowholes and other defects affecting their strength. The minimum clear opening shall be 22 inches in diameter. The frame and cover shall be machined to a non-rattle fit. Manhole covers shall have the words "SANITARY SEWER" cast into the face.

The standard frame and cover, designated MH on the plans, shall be East Jordan Iron Works. No. V-1407-3, Deeter Foundry, Inc. No. 1257 Frame with No. 1277-P Cover, U.S. Foundry & Mfg. Corp. No. A4877 or equal, weighing about 275 pounds. The cover shall have four one inch diameter vent holes and two concealed pickslots.

The sealed frame and cover designated SMH on the plans, shall be East Jordan Iron Works No. V1407GS, Deeter Foundry, Inc., No. 1257 Frame with No. 1277 Cover, U.S. Foundry & Mfg. Corp. No. A5099GN, or equal, weighing about 300 pounds. The bearing surfaces shall be machined by the foundry and provided with a rubber "O" ring or 1/8" neoprene gasket. The cover shall have two concealed pickslots and shall not have vent holes.

3. CONSTRUCTION Site preparation, excavation, sheeting and bracing, backfill and other details for construction not set out herein, shall conform to the specifications for "Gravity Sewer Lines".

Construct manhole inverts on line and grade of concrete and split pipe, brick and mortar, or with Fernco invert builder blocks and mortar. Form the invert smoothly and accurately so as to assure the free, unobstructed flow of sewage through the manhole.

The standard sizes for manhole bottoms, as shown on the plans, are based on a soil bearing pressure of 2000 psf. Should a more yielding soil be encountered, the base shall be stabilized with sufficient bedding of coarse crushed stone to obtain such a bearing. Construct precast manholes as shown on the plans of precast units with a concrete bottom. Excavate hole and set bottom unit, leveling carefully, on a 6" layer of medium stone bedding. Make joints between sections using preformed joint compound. Joints shall be water tight. Fit frames in place on an adequate grout bed or grout bed and brick riser. Joints in brick risers shall not exceed 5/8" in thickness. Plaster the brick exterior surface with a coat of plaster not less than 1/2" thick. Uniformly coat the plastered surface with sealer compound immediately upon completion. After installation, uniformly coat the interior of the manhole with two 1/16" thick coats of interior sealer compound;

one coat gray, one coat white. Seal the outside of manhole in the same manner from 12" below grade to the top.

In lieu of interior sealer application, the contractor may choose to include an approved crystalline waterproofing admixture to the concrete mix design such as "Penetron Admix RP", "Xypex C-1000 Red", or equal. The admixture must be added to concrete at the time of batching per the manufacturer's recommendations. Any necessary mix design modifications recommended by the manufacturer that do not adhere to the "Concrete and Reinforcing" specification must be approved by the engineer. All other requirements remain in effect, including but not limited to, exterior sealing from 12" below grade to the top. There shall be no visible dyed concrete above grade.

Construct poured in place manholes as shown on the plans. Construct special manholes of reinforced concrete as shown on the plans at the location indicated. Remove form fins on the complete interior and, on the exterior, to below one foot grade. Seal inside of these manholes with interior sealer compound as above.

For pipe 30" in diameter and less make connection to manholes using manhole pipe seal gaskets.

Service line connections to manholes may be field-cored to accommodate elevation requirements but shall otherwise follow main line connection specifications. Internal drop connections where applicable, shall follow pressure sewer line connection to manhole detail.

Install the manhole steps at 16" o.c. vertically. The deepest step shall be located not more than 24" above the manhole invert.

Install the cast iron frames and covers to the grade shown on the plans, set in a grout bed. Lap grout up on ring vertically to 1" from the top. In streets, set the manhole covers at the street grade parallel to the plane of the street.

Wherever concrete is applied to an existing concrete or masonry surface, apply a cold joint bonding agent between the surfaces according to the manufacturer's instructions.

Where necessary to fill voids, repair breaks, make patches, etc., clean and moisten the surfaces and use a suitable combination of patching agent and cold joint bonding agent with grout or concrete. The use of brick or chunks of concrete will not be permitted.

All visible leaks in manhole bottoms, barrels and connections shall be stopped.

Where drop connections (specified and paid for elsewhere) are required, they shall be constructed integral with the manhole barrel as the work progresses.

4. TESTING

All manholes shall be visually inspected for signs of seepage. Manholes that show signs of seepage will be resealed until satisfactory results are obtained.

Manhole testing will not be a separate pay item, but will be considered incidental to the work.

5. BASIS OF PAYMENT

The following Basis of Payment will apply to unit price contracts only. Where this item is a part of a lump sum contract or item, this Basis of Payment will not apply.

Manholes will be paid for at the contract unit prices as follows:

Each manhole constructed will be paid for as a basic manhole by the indicated diameter per each with a vented cover or a sealed cover. If the depth exceeds 6.0 feet, then additional payment will be made per linear foot extra depth installed according to the manhole diameter. Manholes will be measured for depth in the vertical plane from the top of cover to the centerline of the invert at the bottom.

Payment will be made in accordance with the following schedule of values which shall be shown on the partial payment form.

- | | |
|--|-----|
| 1. Installation and Backfill | 60% |
| 2. Frame and Cover Installation..... | 20% |
| 3. Invert and Bench Construction | 10% |
| 4. Sealing | 10% |

These payments shall be settlement in full for all excavation, materials, labor and equipment used in construction, including manhole steps, frames and covers, plastering, smooth flow invert transitions, backfill, and cleaning up.

Coarse crushed stone actually used to stabilize the ground for installation of the manhole base section will be paid for at the contract unit price for Crushed Stone.

The 6 inch base leveling course of medium stone bedding will not be a pay item.

Manhole drop connections will be paid for under that specification.

PIPE CULVERTS AND STORM SEWERS

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. This item shall consist of furnishing and installing pipe culverts, arch pipe culverts and flared end sections for cross drains, side drains and storm sewers. These structures, of the types, sizes and dimensions as required on the plans, shall be furnished and installed at such places as designated by the Engineers, all in accordance with these specifications and in conformity with the lines and grades. This item shall include excavation, backfilling, trench required bracing (if required), and all fittings necessary to complete the pipe lines. It shall also include the furnishing and installing of such joints and such connections to existing pipes, catch basins, headwalls, etc., as may be required to complete the work shown on the plans or as directed by the Engineers.

PART 2: MATERIALS

2.01 CONCRETE PIPE CULVERTS

- A. Pipe used for Concrete Pipe Culverts shall conform to the requirements of standard specifications for reinforced concrete culvert pipe, ASTM Pipe Designation: C76, Class III, Wall B, unless specified differently elsewhere.
- B. Pipe arches shall conform to the requirements of ASTM Pipe Designation: C-506, Class A-III. All concrete pipe arches shall be reinforced concrete.

2.02 FLARED END SECTIONS

- A. Flared end sections shall conform to MDOT standard plans and applicable portions of concrete pipe culvert reference specifications.

2.03 PIPE ARCHES

- A. Pipe Arches shall conform to the requirements of ASTM Pipe Designation: C506, Class A-III, unless specified differently elsewhere. All concrete pipe arches shall be reinforced concrete.

2.04 HIGH DENSITY POLYETHYLENE (HDPE)

- A. High density polyethylene (HDPE) pipe shall conform to the requirements of Type S pipe under AASHTO M252, M294 and MP7. Joints are to be sealed by a factory-installed rubber O-ring gasket that meets the requirements of ASTM

F477. Joints must meet or exceed the requirements of ASTM F1417 water-tight field tests.

2.05 HP STORM PIPE – DUAL WALL – PP PIPE

- A. HP Storm Pipe shall conform to the requirements of ASTM F2881 or AASHTO M330. The joint shall be watertight according to the requirements of ASTM D3212. Gaskets shall meet the requirements of ASTM F477. Gasket shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly. 12-through 60-inch (300 to 1500 mm) diameters shall have an exterior bell wrap installed by the manufacturer. Joints must meet or exceed the requirements of ASTM F1417 water-tight field tests.

2.06 ALUMINIZED STEEL PIPE

- A. The Aluminized Steel Pipe shall be Type 2 and shall conform to the applicable requirements of AASHTO –274 or ASTM A-929. It shall be manufactured in accordance with the applicable requirements of AASHTO –36 or ASTM A-760. It shall be 16 gage with 2-2/3 x 1/2 Corrugation.

2.07 BITUMINOUS PLASTIC SEALER

- A. The bituminous plastic sealer shall conform either of the following:
 - 1. The requirements of ASTM Standard Specification 41-70 and shall be composed of refined petroleum asphalt dissolved in a suitable solvent and stiffened with an inert mineral filler. It shall be Talcote, as manufactured by Gibson-Homans Company, Gretna, La., or equal.
 - 2. The requirements of ASTM Standard Specification C990-01a and shall be composed of refined hydrocarbon resins and plasticizing compounds reinforced with an inert mineral filler and shall contain no solvents. It shall be EVERGRIP 990, as manufactured by Gulf States Asphalt Company, South Houston, TX, or equal.
- B. Mortar for connections to other drainage structures shall be composed of 1:2 Portland cement and sand.
- C. All approved laboratory test reports covering all the pipe and other materials shall be furnished by the manufacturer.

2.08 BITUMINOUS COATED CORRUGATED METAL CULVERT PIPE AND PIPE ARCHES

- A. Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches shall conform to the requirements of the Standard Specifications for Corrugated Metal Culvert Pipe, AASHTO Designation —36 Type I, except the minimum gauge thickness shall be as shown on the plans, however, corrugated metal pipe manufactured from sheets thicker than that specified will be acceptable when approved by the Engineer. The internal diameter of corrugated metal pipe shall be determined by inside measurement between the crests of the corrugations.
- B. In addition, the Corrugated Metal Pipe and Arches shall be completely coated inside and out with bituminous material in accordance with the requirements of Standard Specifications for Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches, AASHTO Designation —190 Type C, fully coated with paved invert.
- C. The pipe shall be coated uniformly to a minimum thickness of 0.05 inch, measured on the crest of the corrugations and the pavement shall have a minimum thickness of 1/8" above the crest of the corrugations.

2.09 FITTINGS

- A. Fittings shall conform to the respective pipe material requirements.

PART 3: CONSTRUCTION

3.01 PIPE LAYING

- B. Excavation shall be true to line and grade within 0.05 feet. Excavation carried below the grade shall be backfilled at the Contractor's expense with selected materials. Materials excavated from the trenches may be used if it is suitable; otherwise, selected borrow material shall be used. Any material or obstructions in the way of the excavation of the pipe trenches shall be removed and disposed of off the project limits.
- C. The trench width shall be not less than 12 inches greater than the outside diameter of the pipe. The Contractor shall do such trench bracing, de-watering, sheathing, or shoring necessary to perform and protect the excavation, and shall remove such material as backfill progresses.
- D. The pipe shall be firmly and accurately set to line and grade so that the invert will be smooth and uniform, and any pipe which is not in true alignment, or which shows any settlement after laying, shall be taken up and re-laid without extra compensation. Pipe shall be laid on a prepared bed which will provide a full bearing for the barrel and which is uniformly firm throughout its entire length.

- E. The laying of concrete pipe shall begin at the downstream end, with the spigot or tongue end in the direction of flow and proceed toward the upstream end with the pipe joints abutting and closely joined, and so matched that they will form a culvert with a smooth and uniform invert. The joints of concrete pipe culverts shall be made with bituminous plastic sealer. Mortar joints of concrete pipe culverts will not be allowed.
- F. Bituminous Coated Corrugated Metal Pipe shall be laid carefully with outside laps of circumferential joints pointing upstream. The longitudinal laps parallel to the center line of the pipe culvert shall be placed on the sides of the culvert with the outside laps pointing down. The ends of the sections shall be fully and closely joined and true to the lines and grades established. Each section or joint of pipe shall be securely attached to the adjoining sections or joint of pipe with connecting bands, or other approved type of connector.
- G. The bands or other type of connector shall be tightly drawn or connected so as to form a rigid joint. Any metal in joints which is not thoroughly protected by galvanizing shall be coated with approved bitumen. Any breaks in the bitumen shall be repaired with the type and kind of bitumen used originally in coating the pipe. Corrugated Metal Pipe of 42 inch or larger diameter shall be strutted as shown on the plans or as directed. The struts shall be placed before the embankment is placed and removed when so ordered. The ends of the pipe shall be rigidly supported to prevent any movement pending and during the construction of end supports.
- H. Construction methods of Bituminous Corrugated Metal Pipe Arches shall conform reasonably close to the requirements for Bituminous Coated Corrugated Metal Pipe Culverts. Pipe Arches 58" x 36" and larger shall be braced prior to back-filling operations. The branches shall be not less than 4" x 4" timbers spaced five feet apart between upper and lower sills which shall also be not less than 4" x 4" timbers.
- I. All pipe utilized on this project shall be handled and installed according to the manufacturers recommendations and instructions, and shall comply with all applicable guidelines.
- J. On the plans, the required lengths of the pipes are specified. If any of these lengths are not exact multiples of the delivered pipe lengths, the pipes must be sawed by the contractor so that the correct length of pipe is installed. The partial pieces of pipes not installed will not be paid for. The sawing of the pipes will not be paid for separately.
- K. All pipe joints shall be completely wrapped in Type V (Non-Woven) Geo-Textile Fabric as specified in Table I, Geotextiles (714.13.11—Table) of Section S-714.13—Geotextiles of the latest edition of the Mississippi Standard

Specifications for State Aid Road and Bridge Construction. Geotextile Fabric shall extend a minimum of 18 inches beyond the joint.

3.02 BACKFILLING

- A. The backfill material shall conform to the selected borrow material in the "Granular Material" specification. Great care shall be used to obtain thorough compaction under the haunches and along the sides to the top of the pipe. The backfill shall be placed in loose layers not exceeding 6" in depth and successive layers shall not be placed until thorough compaction is obtained. Each lift of embankment in trenches under areas to be paved shall be compacted to 95% Standard Proctor density.

3.03 CONNECTIONS

- A. Where the plans call for connections to existing or proposed structures or lines, these connections shall be watertight and made so that a smooth uniform flow line will be obtained. Such connections shall be made by the Contractor at no extra compensation.
- B. The joints of all pipe culverts to other drainage structures shall be caulked and filled with mortar. Joints shall be thoroughly wet before applying mortar, and sufficient mortar shall be used to form a bead around the outside of the joint and to fill the whole joint to the inside of the connection. The inside of the joint shall be wiped and finished smooth. After the initial set, the mortar on the outside shall be cured with a cover of thoroughly wetted earth or burlap.

3.04 BASIS OF PAYMENT

- A. Payment will be made per linear foot for Pipe Culverts and Pipe Arches at the price set out in the accepted proposal for the kind and size pipe involved and without regard to the depth of cut. Measurement will be made for the actual length of pipe installed.
- B. Flared End Sections for Pipe Culverts will be paid for at the contract unit price bid per each, of the kind and size designated.
- C. Excavation for pipe culverts and other drainage structures will not be a separate pay item but is considered incidental to the installation.
- D. Any pipe fittings called for on the plans or required for a complete installation will not be paid for separately and the cost of same will be included in the price of items bid upon.
- E. Bedding and backfill material will not be measured for payment but the cost of

same will be included in the price of items bid upon.

- F. There is no separate payment for furnishing and installing the Geotextile Fabric at the pipe joints.
- G. It is the solely contractor's responsibility to verify the type, size, and class of pipe designated for this project and to verify all pipe lengths in the field prior to ordering pipe. Any costs associated with pipe which has to be returned will be absorbed by the contractor. This includes but is not limited to return freight cost and re-stocking fees.
- H. This payment shall be full compensation for all labor, materials, and equipment used in connection with the satisfactory completion of all items of work including excavation, furnishing and installing and connecting pipe, backfilling, compaction, buried obstructions, and all other incidentals necessary to complete the pipe line.
- I. The above mentioned Basis of Payment will apply to unit price contracts only. Where this item is a part of a lump sum contract or item, the unit price Basis of Payment information will not apply.