

TABLE OF CONTENTS

TECHNICAL SPECIFICATIONS

Division 0 - Bidding and Contract Requirements

<u>Section</u>	<u>Title</u>
00100	Instructions to Bidders
00422	Corporate Certificate
00425	Contractor's License Certification
00500	Sample Contract Agreement
00700	General Conditions
00800	Supplementary Conditions

Division 1 - General Requirements

01010	Summary of Work
01300	Submittals
01320	Construction Photographs
01500	Construction Facilities and Temporary Controls
01700	Contract Closeout
01720	Record Documents

Division 2 - Sitework

02000	General Construction Requirements
02125	Erosion and Sedimentation Control for Infrastructure Projects
02355	Steel H-Section Piles
02936	Grassing

ATTACHMENTS:

- Plans prepared by Engineering Strategies, Inc. – Cover Sheet and Sheet S1.

SECTION 00100 INSTRUCTIONS TO BIDDERS

1.01 CONTRACT DOCUMENTS

- A. The Contract Documents include the Contract Agreement, Invitation to Bid, Instructions to Bidders, Contractor's Bid (including all documentation accompanying the Bid and any post-Bid documentation required by the Owner prior to the Notice of Award), Bonds, all Special Conditions, General Conditions, Supplementary Conditions, Specifications, Drawings, and addenda, together with written amendments, change orders, field orders and the PM/CM's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement.
- B. Shop drawing submittals reviewed in accordance with the General Conditions, geotechnical investigations and soils reports, and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site, are not Contract Documents.
- C. The Contract Documents shall define and describe the complete work to which they relate.

1.02 DEFINITIONS

- A. Where the following words or the pronouns used in their stead occur herein, they shall have the following meaning:
 - 1. "Owner" shall mean Rockdale County, Georgia, party of the first part to the Contract Agreement, or its authorized and legal representatives.
 - 2. "Program Manager/Construction Manager" shall mean Rockdale Water Resources-Engineering Dept., hereinafter also designated as "PM/CM".
 - 3. "Designer" shall mean Rockdale County and Engineering Strategies, Inc.
 - 4. "Contractor" shall mean the party of the second part to the Contract Agreement or the authorized and legal representative of such party.
 - 5. "Work" and "Project" shall mean the entire completed construction required to be furnished under the Contract Documents.
 - 6. "Contract Time" shall mean consecutive calendar days as provided in the Contract Document for completion of the Project, to be computed from the date of the Notice to Proceed.
 - 7. "Liquidated Damages" shall mean the sum of \$100.00 which the Bidder agrees to pay for each consecutive calendar day beyond the Contract Time required to complete the Project. Liquidated Damages will end upon written notification from the Owner of final acceptance of the Project.
 - 8. "Products" shall mean materials or equipment permanently incorporated into the Project.
 - 9. "Provide" shall mean to furnish and install.

10. "Balanced Bid" shall mean the total amount bid reasonably reflects the value of that item with regard to the entire job considering the prevailing cost of labor, material and equipment in the relevant market. A Bid is unbalanced when, in the opinion of the Owner, total amounts bid on any of the listed items do not reasonably reflect such values.
11. "Substantial completion of the work", solely for the purposes of Official Code of Georgia Annotated (O.C.G.A.) §13-10-20(c), shall be defined as occurring on the date of the written notification from the PM/CM that the Project is ready for final inspection, as specified in Section 00800, Article 30, paragraph (g).
12. "Satisfactorily completed", solely for the purposes of O.C.G.A. §13-10-20(b), shall mean the completion of all work, certifications and affidavits as specified in Section 00800, Article 30, paragraph (g).

1.03 PREPARATION AND EXECUTION OF BID

- A. Each Bid must be prepared to represent that it is based solely upon the materials and equipment specified in the Contract Documents.
- B. Each Bid must be submitted on the Bid forms which are attached to the Contract Documents. All blank spaces for Bid prices, both words and figures, must be filled in, in ink. In case of discrepancy, the amount shown in words will govern. All required enclosed certifications must be fully completed and executed when submitted.
- C. Each Bid must be submitted in a sealed envelope, addressed to the Owner. Each sealed envelope containing a Bid must be plainly marked on the outside as, "Bid for Rockdale County, Georgia- Yellow River Sewer Crossing Rehabilitation for Rockdale Water Resources" with ITB #20-22. Please refer to the Bid Documents, page 2, for complete submittal instructions.
- D. The Bidder shall provide on the outside of the sealed envelope the following information; otherwise the Bid will not be opened and will be returned to the Bidder:
 1. Bidder's Name
 2. Georgia Utility Contractor License Number
 3. BID# 20-22 Yellow River Sewer Crossing Rehabilitation for Rockdale Water Resources
- E. When mailing your Bid Documents, the sealed envelope containing the Bid Form must be enclosed in another envelope addressed to the Rockdale County Department of Finance, Purchasing Division, P.O. Box 289, Conyers, GA 30012, Attn: Meagan Porch.
- F. Any and all Bids not meeting the aforementioned criteria for Bid submittal, may be declared non-responsive, and subsequently returned to the Bidder.

G. The Contractor, in signing a Bid on the whole or any portion of the Project, shall conform to the following requirements:

1. Bids which are not signed by individuals making them shall have attached thereto a power of attorney evidencing authority to sign the Bid in the name of the person for whom it is signed.
2. Bids which are signed for a partnership shall be signed by all of the partners or by an attorney-in-fact. If a Bid is signed by an attorney-in-fact, there should be attached to the Bid a power of attorney executed by the partners evidencing authority to sign the Bid.
3. Bids which are signed for a corporation shall have the correct corporate name thereof and the signature of the president or other authorized officer of the corporation manually written below the corporate name following the wording "By _____". Corporation seal shall also be affixed to the Bid.
4. The Bidder shall complete, execute and submit the following documents, which are attached to these Contract Documents:
 - a. The Bid
 - b. The Bid Bond
 - c. Corporate Certificate, if the Bidder is a corporation
 - d. Non-Collusion Affidavit of Prime Bidder
 - e. Non-Collusion Affidavit of Sub-Contractor
 - f. Contractor's Affidavit
 - g. Sub-Contractor's Affidavit
 - h. Affidavit Verifying Status for County Public Benefit Application
 - i. Contractor's License Certification

1.04 METHOD OF BIDDING

- A. Lump sum price for each of the several items in the Bid of each Bidder shall include its pro rata share of overhead and profit so that the sum of the products, obtained by multiplying the quantity shown for each item by the unit price, represents the total Bid. Any Bid not conforming to this requirement may be rejected. Additionally, Unbalanced Bids will be subject to rejection. Conditional Bids will not be accepted. The special attention of all Bidders is called to this provision, for should conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities nor extra compensation allowed.

1.05 BID SECURITY

- A. Each Bid must be accompanied by a Bid Bond, prepared on the form of Bid Bond included herein or a Surety Company's Standard Bid Bond, duly executed by the Bidder as principal and having as surety thereon a surety company authorized to do business in the State of Georgia and listed in the latest issue of U.S. Treasury Circular 570, in the amount of 5 percent of the Bid. Attorneys-in-fact who sign Bonds must file with each Bond a currently dated copy of their power of attorney.

- B. If for any reason whatsoever the successful Bidder withdraws from the competition after opening of the Bids, or if Bidder refuses to execute and deliver the Contract and Bonds required within 10 days after receipt of notice of the acceptance of Bid, the Owner may proceed to enforce the provisions of the Bid Bond.

1.06 RECEIPT AND OPENING OF BIDS

The Owner may consider a minor irregularity any Bid not prepared and submitted in accordance with the provisions hereof and may waive any minor irregularities 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 opened.

1.07 SUBCONTRACTS

The Bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the Owner.

1.08 CONDITIONS OF THE PROJECT

- A. Each Bidder must be informed fully of the conditions relating to the construction of the Project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the Contract. Insofar as possible, the Contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.
- B. The Bidder is advised to examine the location of the Project and to be informed fully as to its conditions; the conformation of the ground; the character, quality and quantity of the products needed preliminary to and during the prosecution of the work; the general and local conditions and all other matters which can in any way affect the work to be done under the Contract. Failure to examine the site will not relieve the successful Bidder of an obligation to furnish all products and labor necessary to carry out the provisions of the Contract.

- C. The Bidder shall notify the Owner of the date and time Bidder proposes to examine the location of the Project. The Bidder shall confine examination to the specific areas designated for the proposed construction, including easements and public right-of-ways. If, due to some unforeseen reason, the Owner's proceedings for obtaining the proposed construction site (including easements), have not been completed, the Bidder may enter the site only with the express consent of the property owner. The Bidder is solely responsible for any damages caused by examination of the site.

1.10 NOTICE OF SPECIAL CONDITIONS

- A. If any special federal, state, county or city laws, municipal ordinances, and the rules and regulations of any authorities having jurisdiction over construction of the Project, enclosed, herein referred to, or applicable by law to the Project, conflict with requirements of the Contract Documents, then the most stringent requirement prevails.

1.11 OBLIGATION OF BIDDER

- A. By submission of a Bid, each Bidder warrants that Bidder has inspected the site and has read and is thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to the Bid.

1.12 METHOD OF AWARD

- A. The contract will be awarded to the lowest, responsive, responsible Bidder submitting the Bid which is in the best interest of the Owner as determined by the Owner.
- B. The Bidder to whom the award is made will be notified. The Owner reserves the right to reject any and all Bids and to waive any minor irregularities in Bids received whenever such rejection or waiver is in the Owner's interest.
- C. A responsive Bidder who submits a Bid in the proper form without qualification or intent other than as called for in the Contract Documents, and who binds himself or herself on behalf of the Bid to the Owner with the proper Bid Bond completed and attached, and who properly completes all forms required to be completed and submitted at the time of the Bidding. The Bidder shall furnish all data required by these Contract Documents. Failure to do so may result in the Bid being declared non-responsive.
- D. Acceptance of the Bidder's documentation and substantiation or Contract Award by the Owner does not relieve the Bidder of liability for non-performance as covered in the Contract Documents, nor will the Bidder be exempted from any other legal recourse the Owner may elect to pursue.

END OF SECTION

SECTION 00422
CORPORATE CERTIFICATE

I, _____, certify that I am the Secretary of the Corporation named as Contractor in the foregoing Bid; that _____, who signed said Bid on behalf of the Contractor was then _____ of said Corporation; that said Bid was duly signed for and on behalf of said Corporation by authority of its Board of Directors, and is within the scope of its corporate powers; that said Corporation is organized under the laws of the State of _____.

This __ day of _____, 202__.

(Corporate Secretary) _____ (SEAL)

END OF SECTION

SECTION 00425
CONTRACTOR'S LICENSE CERTIFICATION

Contractor's Name: _____

Georgia Utility Contractor's License Number: _____

Expiration Date of License: _____

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____

Printed: _____

Date: _____

END OF SECTION

**SECTION 00500
SAMPLE CONTRACT**

**(PAGE 1 OF 7)
AGREEMENT FOR THE CONSTRUCTION OF THE
[PROJECT NAME]**

This Agreement entered into on this ____ day of _____, 202__, between ROCKDALE COUNTY, GEORGIA, a political subdivision of the State of Georgia, whose address is 962 Milstead Avenue, Conyers, Georgia 30012, (hereinafter referred to as the "County") and (_____, a _____, whose address is _____ (hereinafter referred to as "Contractor").

WHEREAS, the County desires to engage the services of Contractor for the construction of the _____; and

WHEREAS, Contractor is qualified to perform this service and desires to render this service to the County as provided herein.

NOW THEREFORE, the County engages the services of Contractor for and in consideration of the mutual promises contained in this Agreement and the parties agree as follows:

1. Services Provided by Contractor.

The Contractor will furnish all products, tools, construction equipment, skill and labor of every description necessary to carry out and to complete in a good, firm, substantial workmanlike manner the construction of the [PROJECT NAME] as described in the County's Invitation to Bid (ITB) [ITB #20-22] incorporated herein by reference, (hereinafter called "Work"), and Contractor's bid dated [DATE], attached hereto and made a part hereof (hereinafter called "Bid"). Contractor shall provide, at their expense, all vehicles and equipment necessary to provide this Work. The Work shall be performed at the direction of the Stormwater Utility's General Engineering Manager or their designee and consistent with all Federal, State and local laws.

The Contract Documents, Bid Documents, Invitation to Bid, and drawings are considered essential parts of the Agreement, and requirements occurring in one are as binding as though occurring in all. They are intended to define, describe and provide for all labor necessary to complete the Work in an acceptable manner, ready for use, or operation by the County.

2. Fees and Compensation.

- (a) **Contract Price:** The Contract Price shall not exceed [CONTRACT AMOUNT], and shall be the total amount payable by the County to the Contractor for the performance of the Work set forth in the Contract Documents, unless amended as agreed upon by both parties in writing as detailed in Section 6 of this Agreement. The County shall provide payment within _____ () days of receiving said invoice.

It is understood that the Contractor shall provide and pay for all products, labor (including labor performed after regular working hours, on Saturdays or Sundays, or on legal holidays), tools, construction equipment, supervision, and all other services and facilities of any nature whatsoever necessary to execute, complete, place into operation, and deliver the Work.

The Contractor shall be responsible for any additional expenses incurred by the County as a result of the extended work hours, including resident inspection overtime. The cost associated with resident inspector overtime will be deducted from the Contractor's monthly payment request.

- (b) **Payments Withheld:** The County may decline to approve an application for payment, in whole or in part, as may be necessary to protect the County from loss because of:
- (1) Failure of the Contractor to make payments properly to subcontractors or for labor or products.
 - (2) Unsatisfactory prosecution of the Work by the Contractor either due to quality of the Work or if the Contractor is behind the currently approved construction schedule.

When the above reasons for nonpayment are corrected, then payment will be made for amounts withheld because of such reasons,

not later than the next payment.

(c) **Retention: The County will retain the following amounts from each properly certified estimate:**

(1) Until the value of the Work completed, including stored materials, is at least 50 percent of the Contract amount, 10 percent of the value of all Work satisfactorily completed, including stored materials.

(2) When the value of the completed Work totals at least 50 percent of the Contract amount, the County will reduce the retainage to 5 percent of the value of Work completed, including stored materials provided the Work is progressing satisfactorily and there is no specific cause for retaining a larger sum. The total amount retained will be at least 5 percent of the Contract amount, adjusted for Change Orders, until the date of final payment.

(3) The County may elect to reinstate retention of 10 percent of the value of the Work completed if at any time the Contractor fails to make satisfactory progress or if there is other specific cause. No form of collateral in lieu of cash will be acceptable as retainage.

Amounts retained by the Contractor from payments due to suppliers and subcontractors (expressed as a percentage) shall not exceed that being retained by the County.

3. Effective Dates of Agreement.

The effective date of this Agreement shall be the date said Agreement is signed by the Chairman of the Rockdale County Board of Commissioners (the "Board"). The terms of this Agreement shall be _____ () months from the effective date, unless terminated by either party as detailed in section 13 of this Agreement.

The Contractor shall begin the Work no later than thirty (30) days after issuance of the Notice to Proceed, and shall complete the Work no later than _____ () days after issuance of the Notice to Proceed, unless a time extension is authorized in writing by the Project Manager.

Time is of the essence and is an essential element of this Contract, and the Contractor shall pay to the County, not as a penalty, but as liquidated damages, the sum of \$ _____ for each calendar day that there is default of completing the Work within the time limit named herein. If the Contractor abandons the Contract before commencement of the Work or defaults in completion of all the Work after commencement thereof, the Contractor shall be liable for such liquidated damages. These fixed liquidated damages are not established as a penalty but are calculated and agreed upon in advance by the County and the Contractor due to the uncertainty and impossibility of making a determination as to the actual and consequential damages incurred by the County and the general public of Rockdale County, Georgia as a result of the failure on the part of the Contractor to complete the Work on time. Such liquidated damages referred to herein are intended to be and are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity by statute, or under the Contract.

4. Rejection of Work and Materials.

All products furnished and all Work completed will be inspected by the County. All products furnished and all Work completed that is not in accordance with the Contract Documents or that is defective will be rejected. All rejected products or Work shall be removed immediately. If rejected products or Work is not removed within 48 hours, the County will have the right and authority to stop the Work immediately and will have the right to arrange for the removal of said rejected products or Work at the cost and expense of the Contractor.

5. Supervision of Work.

The Contractor shall supervise and direct the Work. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of the Work. The Contractor shall employ and maintain on the Work a qualified supervisor or superintendent who shall be designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.

The supervisor shall have full authority to act on behalf of the Contractor and to execute the orders or directions of the County without delay. The supervisor shall have full authority to promptly supply products, tools, plant equipment and labor as may be

required. The supervisor's authority shall be such that all communication given to the supervisor shall be as binding as if given to the Contractor.

The Contractor shall employ only competent and skilled personnel. The Contractor shall, upon demand from the County, immediately remove any superintendent, foreman or workman whom the County may consider incompetent or undesirable.

6. Changes in the Contract.

The County may at any time, as the need arises, order changes within the scope of the Work without invalidating the Contract Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the Work, an equitable adjustment will be authorized by Change Order.

7. Insurance.

The Contractor shall not commence any work under this Contract until all insurance, as stipulated in the Invitation to Bid, has been obtained and such insurance has been approved by the County, nor shall the Contractor allow any subcontractor to commence any work on subcontractor's contract until all similar insurance required of the subcontractor has been so obtained and approved by the Contractor.

8. Interruption of Facility Operations.

The Contractor shall provide the County with written notice at least three days prior to any interruption in facility operations required by construction activity. The notice shall include the date and time of the scheduled interruption, the length of time the interruption will be in effect, the procedures to be followed, a complete identification of all those processes, equipment and operations to be affected and all other information the County may require. The Contractor shall provide any equipment, piping, auxiliary power or other means necessary to sustain facility operations.

9. Protection of Work, Property and Persons.

- (a) The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all products to be incorporated therein, whether in storage on or off the site, and 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.
- (b) The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction, promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54) as amended. The Contractor shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection.
- (c) The Contractor shall remedy all damage, injury or loss to any property, improvements or facilities caused, directly or indirectly, in whole or in part, by the Contractor or any of the Contractor's subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. The property, improvements or facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the Work. In case of failure on the part of the Contractor to restore such property, or make good such damages or injury, the County may, after 48 hours written notice, proceed to repair, rebuild, or otherwise restore such property, improvements or facilities as may be deemed necessary. The cost thereof will be deducted from any monies due or which may become due the Contractor under this Contract.
- (d) In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the County, shall act to prevent threatened damage, injury or loss.
- (e) Completed Work and stored products shall be suitably protected during unseasonable weather, to allow Work to proceed in a timely fashion. Work planned, or in progress, should be performed to minimize impact of adverse weather.

10. Protection of the Environment.

- (a) The Contractor shall be responsible for taking all measures required to minimize all types of pollution associated with the undertaking of the proposed Work and shall abide by the requirements of all governmental agencies having jurisdiction over the Work or Contractor's Project operations. This shall include but not be limited to air, water & noise pollution during torch cutting, grinding, burning, and grading operations.
- (b) Any area used or involved in the Project that is disturbed by the Contractor shall be restored to original or better condition, even though such area is outside the limits of that specified for grading, grassing, or landscaping.
- (c) The Contractor is responsible for maintenance of all erosion control measures, final removal of all temporary BMP's, and irrigation of all permanent vegetative measures until fully established.

11. Protection, Location and Relocation of Utilities.

The Contractor shall notify utility owners of the new work in accordance with Georgia Law by calling the Utilities Protection Center (UPC) at 800-282-7411, 72 hours before work is to begin. The Contractor shall protect from damage all existing improvements or utilities at, or in proximity to, the site of the Work, and shall repair or restore any damage to such facilities resulting from failure to exercise reasonable care in the performance of Work. If the Contractor fails or refuses to repair any such damage promptly, the County may have the Work performed and charge the cost thereof to the Contractor.

Prior to the construction or installation of any new Work, the Contractor shall excavate all existing utilities within the vicinity of the Work to their actual vertical and horizontal location. In order to avoid conflicts between existing and new Work, the Contractor shall either relocate the existing utility on a temporary or permanent basis or shall take whatever means necessary to protect the existing facilities or utilities during the installation of new Work.

12. Indemnification.

In addition to its agreement to obtain and maintain insurance as set forth herein, the Contractor agrees to indemnify and hold harmless the County, its officers, agents, and employees, from any and all claims against the County, its officers, agents and employees, which arise out of any act or omission of the Contractor or any of the Contractor's officers, agents and/or employees, and any and all claims which result from any condition created or maintained by the Contractor or anyone employed by the Contractor or any of their officers, agents or employees, which condition does not specify to be created or maintained by this Contract.

13. Termination of Agreement.

In the event either party elects to terminate this Agreement for whatever reason deemed appropriate, written notice shall be provided and termination shall be effective 15 days from receipt of written notice.

14. Notice.

Any notice or other communication required or permitted to be given under this Agreement must be in writing and must be mailed by overnight delivery or certified mail, postage prepaid, so that the notifying party can prove delivery of notice and the date thereof, and addressed as follows:

To the County:

Rockdale County, Georgia
Water Resources
Attn: [PROJECT MANAGER]
P.O. Box 1495
Conyers, Georgia 30012

To the Contractor:

[COMPANY NAME]
Attn: [REPRESENTATIVE]
[ADDRESS 1]
[ADDRESS 2]
[CITY, STATE, ZIP CODE]

The addresses stated in this paragraph may be changed by the respective parties upon a documented notice delivered in advance, pursuant to this paragraph.

15. Assignment.

The Contractor shall have no right to transfer or assign its interest in this Agreement without the prior written consent of an authorized representative of the County.

16. Corporate Authority.

Contractor represents to the County that this Agreement, the transaction contemplated in this Agreement, and the execution and delivery hereof, have been duly authorized by all necessary corporate proceedings and actions, including, without limitation, the action on the part of the directors. The individual executing this Agreement on behalf of Contractor warrants that he or she is authorized to do so and that this Agreement constitutes the legally binding obligation of the corporation.

17. Waiver.

No action taken pursuant to this Agreement shall be deemed to constitute a waiver by the party taking such action of compliance with any representation, warranty, covenant or agreement in this Agreement. The waiver by any party of a breach of any provision or condition contained in this Agreement shall not operate or be construed as a waiver of any subsequent breach or of any other conditions.

18. Severability.

If any provision of this Agreement or application to any party or circumstances shall be determined by any court of competent jurisdiction to be unenforceable to any extent, the remainder of this Agreement or the application of such provision to such person or circumstances, other than those as to which it is so determined invalid or unenforceable, shall not be affected thereby, and each provision hereof shall be valid and shall be enforced to the fullest extent permitted by law.

19. Interpretation.

Should any provision of this Agreement require a judicial interpretation, the parties agree that the body interpreting or construing this Agreement will not apply the assumption that the terms of this Agreement will be more strictly construed against one party by reason of the rule of legal construction that an instrument is to be construed more strictly against the party which itself or through its agents prepared the Agreement. The parties acknowledge and agree that they and their agents have each participated equally in the negotiation and preparation of this Agreement.

20. Venue & Jurisdiction.

The County and the Contractor, by entering into this Promissory Note, hereby agree that the courts of Rockdale County, Georgia shall have jurisdiction to hear and determine any claims or disputes between them pertaining directly or indirectly to this Agreement. Contractor expressly submits and consents in advance to such jurisdiction in any action or proceeding commenced in said courts. The choice of forum set forth in this section shall not be deemed to preclude the bringing of any action by the County or the enforcement by the County of any judgment obtained in such forum in any other appropriate jurisdiction. Further, the Contractor hereby waives the right to assert the defense of forum non-convenient and the right to challenge the venue of any court proceeding.

21. Governing Law.

This Agreement shall be construed and interpreted according to the provisions of the laws of the State of Georgia.

22. Binding Effect.

This Agreement shall be binding upon the Contractor and its successors and permitted assigns.

23. Further Assurances.

The Contractor agrees to execute, acknowledge, seal and deliver, after the date of this Agreement, without additional consideration, such further assurances, instruments and documents, and to take such further actions, as the County may reasonably request in order to fulfill the intent of this Agreement and the transactions contemplated by this Agreement.

24. Entire Agreement.

This Agreement, its attachments and essential documents (as provided in I I above) represent the entire understanding of the parties with regard to the subject matter of this Agreement. There are no oral agreements, understandings, or representations made by any party to this Agreement that are outside of this Agreement and are not expressly stated in it. No supplement, modification, or amendment of this Agreement will be binding unless executed in writing by all parties.

By signing this Agreement, the parties acknowledge that they have read each and every page of this Agreement before signing same and that they understand and assent to all the terms thereof. In addition, by signing this Agreement, the parties acknowledge that they are entering into this Agreement freely and voluntarily and under no compulsion or duress.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals on the date and year first above written.

[CONTRACTOR'S NAME]

ROCKDALE COUNTY, GEORGIA
BOARD OF COMMISSIONERS

By: _____

By: _____
Oz Nesbitt, Sr., Chairman

Witness:

Attest:

By: _____

By: _____
Jennifer Rutledge, County Clerk

Approved as to Form:

By: _____
M Qader A. Baig, County Attorney

END OF SECTION

**SECTION 00700
GENERAL CONDITIONS**

TABLE OF CONTENTS

<u>Article</u>	<u>Title</u>
	General
1	Notice of Award
2	Execution of Contract Documents
3	Contract Security
4	Insurance
5	Indemnification
6	Notice to Proceed
7	Termination of Work for Default
8	Termination for Convenience of the Owner
9	Assignments
10	Subcontracting
11	Authority of the PM/CM
12	Separate Contracts
13	Laws and Regulations
14	Taxes
15	Notice and Service Thereof
16	Patents
17	Land and Rights-of-Way
18	Products
19	Supervision of Work
20	Interruption of Facility Operations
21	Protection of Work, Property and Persons
22	Protection of the Environment
23	Protection, Location and Relocation of Utilities
24	Schedules, Reports and Records
25	Drawings and Specifications
26	Surveys
27	Testing, Inspection and Rejection of Work
28	Contract Time and Liquidated Damages
29	Changes in the Contract
30	Payments and Completion

SECTION 00700 GENERAL CONDITIONS

GENERAL: The provisions of these General Conditions are intended, but are not limited to, providing general conditions of agreement and provisions toward the awarding of the Contract, the obligations of the successful Bidder and requirements for execution and administration of the Contract. IN ANY EVENT, PROVISIONS IN THIS SECTION ARE SUBJECT TO AND GOVERNED BY PROVISIONS IN THE SUPPLEMENTARY CONDITIONS, AS APPLICABLE.

ARTICLE 1 - NOTICE OF AWARD OF CONTRACT

After receipt of Bids, the Owner shall notify the successful Bidder of the award of the Contract as stipulated in the Supplementary Conditions.

ARTICLE 2 - EXECUTION OF CONTRACT DOCUMENTS

Within 10 days of notification of Award of Contract, the Owner will furnish the Contractor with conformed copies of Contract Documents for execution by the Contractor and the surety.

Within 10 days after receipt, the Contractor shall return all the Documents properly executed by the Contractor and the surety. Attached to each Document shall be an original power-of-attorney for the person executing the Bonds for the surety and certificates of insurance for the required insurance coverage.

Within 30 days after receipt of the conformed Documents executed by the Contractor and the surety with the power-of-attorney and certificates of insurance, the Owner will complete the execution of the Documents. Distribution of the completed Documents will be made upon execution by the Owner.

Should the Contractor and/or the surety fail to properly execute the Documents within the specified time, the Owner will have the right to proceed on the Bid Bond accompanying the Bid.

If the Owner fails to execute the Documents within the time limit specified, the Contractor will have the right to withdraw the Bid without penalty. In such event the Owner will have no liability to the Contractor under these Documents or otherwise.

Should either party require an extension of any of the time limits stated above, this shall be done only by mutual agreement between both parties.

ARTICLE 3 - CONTRACT SECURITY

The Contractor shall furnish separate Performance and Payment Bonds each in a sum equal to the amount of the Contract Price, the Performance Bond conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of the Contract Documents, and the Payment Bond conditioned upon the prompt payment by the Contractor to all persons supplying labor and products 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 where the Project is located and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury

Department Circular Number 570. The expense of these Bonds shall be borne by the Contractor. If at any time a surety on any such Bond is declared bankrupt or loses its right to do business in the State where the Project is located or is removed from the list of Surety Companies accepted on Federal Bonds, 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 as may be satisfactory to the Owner. The premium on such Bond (or Bonds) shall be paid by the Contractor. No further progress payments shall be deemed due, nor shall be made, until the new surety furnishes an acceptable Bond to the Owner.

The person executing the Bond on behalf of the surety shall file with the Bond a general power of attorney, unlimited as to amount and type of Bond covered by such power of attorney and certified to by an official of said surety.

ARTICLE 4 - INSURANCE

The Contractor shall not commence any work under this Contract until all insurance, as stipulated in the Supplementary Conditions, has been obtained and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence any work on subcontractor's contract until all similar insurance required of the subcontractor has been so obtained and approved by the Contractor.

ARTICLE 5 - INDEMNIFICATION

The Contractor shall indemnify and hold harmless the Owner, the PM/CM, the Designer and their agents and employees from and against all claims, damages, losses and expenses including claims consultants' and attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting thereof; and is caused in whole or in part by willful act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

In any and all claims against the Owner, the PM/CM, the Designer, or any of their agents or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under worker's compensation acts, disability benefit acts or other employee benefits acts.

This indemnification and hold harmless obligation shall extend to cover any and all claims not covered by the Owner's Protective Liability Insurance, the requirements of which are specified in Article 4 of the Supplementary Conditions.

ARTICLE 6 - NOTICE TO PROCEED

The Notice to Proceed will be issued, following the pre-construction conference, within 10 days of the execution of the Contract Agreement by the Owner. The time may be extended by mutual agreement between the Owner and the Contractor. If the Notice to Proceed has not been issued

within the 10-day period or within the period mutually agreed upon, the Contractor may terminate the Contract Agreement without further liability on the part of either party.

ARTICLE 7 - TERMINATION OF WORK FOR DEFAULT

(a) The Work may be terminated if:

(1) The Contractor is adjudged bankrupt or insolvent.

(2) The Contractor makes a general assignment for the benefit of creditors.

(3) A trustee or receiver is appointed for the Contractor or for any of Contractor's property.

(4) The Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws.

(5) The Contractor repeatedly fails to supply sufficient skilled workmen, materials or equipment.

(6) The Contractor fails to make satisfactory progress toward timely completion of the Work.

(7) The Contractor repeatedly fails to make prompt payments to subcontractors or material suppliers for labor, materials or equipment.

(8) The Contractor disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the Work.

(9) The Contractor fails to comply with directives of the PM/CM.

(10) The Contractor otherwise violates any provision of the Contract Documents.

(b) The Owner may, without prejudice to any other right or remedy and after giving the Contractor and surety a minimum of 10 days from delivery of a written notice, terminate the services of the Contractor and take possession of the Project and of all products thereon owned by the Contractor, and finish the Work by whatever method the Owner 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 and/or surety shall pay the difference to the Owner. Such costs incurred by the Owner will be determined by the PM/CM and incorporated in a Change Order.

(c) Where the Contractor's services have been so terminated by the Owner, said termination will not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents.

ARTICLE 8 - TERMINATION FOR CONVENIENCE OF THE OWNER

If, for any reason other than those provided for under Article 7, the Owner elects to discontinue, in whole or part, the Work under this Contract, the Owner may, after 10 days from delivery of a written notice to the Contractor and the PM/CM, terminate, in whole or in part, the Contractor's performance of the Work under this Contract. The notice of termination shall specify the extent to which performance of the Work under the Contract is terminated.

In the event of such termination by the Owner, the Contractor shall be entitled to payment for the Work at the jobsite acceptably performed up to the time of the termination and reimbursement for such costs as are reasonably incurred by the Contractor due to the termination and not otherwise compensated. The Contractor shall also be entitled to profit on the amounts payable to the Contractor, but such profit shall be limited to 6 percent of such amounts. The Contractor will not be entitled to any payment, including any anticipated profit, on Work not performed and will not be entitled to any compensation for other economic loss arising out of or resulting from such compensation or damages of any nature.

ARTICLE 9 - ASSIGNMENTS

The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior liens of all persons, firms, and corporations for services rendered or materials supplied for the performance of the Work called for under this Contract.

ARTICLE 10 - SUBCONTRACTING

(a) The Contractor shall not subcontract the complete Work, or any part thereof, and shall not award any work to any subcontractor without prior written approval of the Owner. Owner approval will not be given except upon the basis of written statements containing such information as the Owner may require. At the pre-construction conference, the Contractor shall submit all subcontractors that the Contractor plans to use on the Project. Any changes or additional subcontractors should be submitted at least 14 days prior to the needed approval.

(b) The Contractor shall utilize the services of specialty subcontractors on those parts of the Work which, under normal contracting practices, are best performed by specialty subcontractors, as required by the Owner in the Owner's sole discretion, at no additional cost to the Owner.

If the Contractor desires to perform specialty work, the Contractor shall submit a request to the Owner, accompanied by evidence that the Contractor's own organization has successfully performed the type of work in question, is presently competent to perform the type of work, and the performance of the work by specialty subcontractors will result in materially increased costs or inordinate delays.

(c) The Contractor shall be fully responsible to the Owner for the acts and omissions of the Contractor's subcontractors and of persons either directly or indirectly employed by the Contractor. The Contractor shall be fully responsible to the Owner for the acts and omissions of independent contractors or independent subcontractors of the Contractor and of persons indirectly employed by the Contractor as the Contractor is for the acts and omissions of persons directly employed by the Contractor.

(d) 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 the 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 provision of the Contract Documents.

(e) Nothing contained in this Contract shall create any contractual relation between any subcontractor and the Owner.

ARTICLE 11 - AUTHORITY OF THE PM/CM

The PM/CM will act as the Owner's representative during the construction period. The Owner will decide questions which may arise as to quality and acceptability of products furnished and Work performed. The Owner will interpret the intent of the Contract Documents in a fair and unbiased manner. The PM/CM will make visits to the site and determine if the Work is proceeding in accordance with the Contract Documents. The PM/CM will judge as to the accuracy of quantities submitted by the Contractor in partial payment estimates which these quantities represent. The decisions of the PM/CM will be final and conclusive.

ARTICLE 12 - SEPARATE CONTRACTS

(a) The Owner reserves the right to let other contracts in connection with this Project. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their products and the execution of their work, and the Contractor and other contractors shall properly connect and coordinate their work with each other. If the proper execution or results of any part of the Contractor's work depends upon the work of any other contractor, the Contractor shall inspect and promptly report to the PM/CM any defects in such work that render it unsuitable for such proper execution and results.

(b) The Owner may perform additional work related to the Project with Owner's own forces. The Contractor shall afford the Owner reasonable opportunity for the introduction and storage of products and the execution of work and shall properly connect and coordinate Contractor's work with work performed by Owner's own forces.

(c) If the performance of additional work by other contractors or the Owner is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof will be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the Owner or others involves the Contractor in additional expense or entitles the Contractor to an extension of the Contract Time, the Contractor may make a claim therefor as provided in Article 29.

ARTICLE 13 - LAWS AND REGULATIONS

The Contractor's attention is directed to the fact that all applicable federal, state, county and city laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the Contract as though written out in full herein. The Contractor shall keep fully informed of all laws, ordinances and regulations of the federal, state, county, city and municipal governments or authorities in any manner affecting those engaged or employed in the Work or the materials used in the Work or in any way affecting the conduct of the Work and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in these Contract Documents herein referred to, in relation to any such law, ordinance, regulation, order or decree, the Contractor shall herewith report the same, in writing, to the Owner. The Contractor shall at all times observe and comply with all such existing and future laws, ordinances and regulations, and shall protect and indemnify the Owner, the PM/CM, the Designer and their agents against the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor or by the Contractor's employees.

ARTICLE 14 - TAXES

The Contractor shall pay all sales, consumer, use and other similar taxes required by the law of the place where the Work is performed. The Owner will be responsible for any sales or use tax due on products furnished by the Owner to the Contractor to be incorporated into the Work.

ARTICLE 15 - NOTICE AND SERVICE THEREOF

- (a) All notices, demands, requests, instructions, approvals, and claims shall be in writing.
- (b) Any notice to or demand upon the Contractor will be sufficiently given if delivered at the office of the Contractor specified in the Bid (or at such other office as the Contractor may from time to time designate to the Owner in writing), or if delivered by the United States Mail in a sealed, postage-prepaid envelope, or delivered by facsimile transmission, followed by written confirmation, in each case addressed to such office.
- (c) All papers required to be delivered to the Owner shall be delivered as stipulated in the Supplementary Conditions.
- (d) Any such notice or demand shall be deemed to have been given to the Owner or made as of the time of actual delivery to Owner.

ARTICLE 16 - PATENTS

- (a) The Contractor shall hold and save the Owner, the PM/CM, the Designer and their agents harmless from liability of any kind, including cost and expenses, reasonable attorney's fees, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Work, including its use by the Owner.
- (b) If the Contractor uses any design, process, device or materials covered by letters, trademarks, patent or copyright, the Contractor shall provide for such use by suitable agreement between the Owner and the holder of such patented or copyrighted design, device or material. The Contract prices shall include royalties or costs arising from the use of such design, device or materials, in any way involved in the Work. The Contractor and the Contractor's sureties shall indemnify and save harmless the Owner, the PM/CM, the Designer and their agents from claims for infringement by reason of the use of such patented or copyrighted design, process, device or materials or any trademark or copyright in connection with Work agreed to be performed under this Contract, and shall indemnify the Owner, the PM/CM, the Designer and their agents for any cost, expense, damage and reasonable attorney's fees which it may be obliged to pay by reason of such infringement, at any time during the prosecution of the Work or after completion of the Work.

ARTICLE 17 - LAND AND RIGHTS-OF-WAY

The Owner will provide, as indicated in the Contract Documents and prior to the Notice to Proceed, the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for the use of the Contractor. The Contractor shall confine work and all associated activities to the easements and other areas designated for the Contractor's use. The Contractor shall comply with any limits on construction methods and practices which may be required by easement agreements.

If, due to some unforeseen reason, the necessary easements are not obtained, the Contractor shall receive an equitable extension of Contract Time and/or an equitable increase in the Contract Price to cover the Contractor's additional costs as a result thereof, provided the Owner is notified immediately of the claim. The Contractor's claim therefor shall be handled as provided for under Article 29.

Should additional temporary easements for ingress or egress be required by the Contractor for more suitable access to the Work, these easements shall be obtained by the Contractor, at no additional cost to the Owner.

Additional requirements shall be as stipulated in the Supplementary Conditions.

ARTICLE 18 - PRODUCTS

- (a) Products shall be so stored in accordance with the manufacturer's recommendations to insure the preservation of their quality and fitness for the Work. Stored products to be incorporated in the Work shall be located so as to facilitate prompt inspection.

- (b) Manufactured products shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
- (c) Products shall be furnished in accordance with shop drawings and/or samples submitted by the Contractor and approved by the Designer.
- (d) Products to be incorporated into the Work shall not be purchased by the Contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

ARTICLE 19 - SUPERVISION OF WORK

The Contractor shall supervise and direct the Work. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor shall 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 be present on the site at all times as required to perform adequate supervision and coordination of the Work.

The supervisor shall have full authority to act on behalf of the Contractor and to execute the orders or directions of the PM/CM without delay. The supervisor shall have full authority to promptly supply products, tools, plant equipment and labor as may be required. The supervisor's authority shall be such that all communication given to the supervisor shall be as binding as if given to the Contractor.

The Contractor shall employ only competent and skilled personnel. The Contractor shall, upon demand from the PM/CM, immediately remove any superintendent, foreman or workman whom the PM/CM or Owner may consider incompetent or undesirable.

ARTICLE 20 - INTERRUPTION OF FACILITY OPERATIONS

The Contractor shall provide the Owner with written notice at least five days prior to any interruption in facility operations required by construction activity. The notice shall include the date and time of the scheduled interruption; the length of time the interruption will be in effect; the procedures to be followed in effecting the interruption; a complete identification of all those processes, equipment and operations to be affected; and all other information the Owner may require. The Contractor shall provide any equipment, piping, auxiliary power or other means necessary to sustain facility operations or function for interruptions which have not been identified by the Specifications, or when interruptions must exceed the time allowed by the Specifications.

Additional requirements, if any, shall be as stipulated in the Supplementary Conditions.

ARTICLE 21 - PROTECTION OF WORK, PROPERTY AND PERSONS

- (a) The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to

prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all products to be incorporated therein, whether in storage on or off the site, and 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.

- (b) The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction, promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54). The Contractor shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection.
- (c) The Contractor shall remedy all damage, injury or loss to any property, improvements or facilities caused, directly or indirectly, in whole or in part, by the Contractor or any of the Contractor's subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. The property, improvements or facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the Work. In case of failure on the part of the Contractor to restore such property, or make good such damages or injury, the Owner may, after 48 hours written notice, proceed to repair, rebuild, or otherwise restore such property, improvements or facilities as may be deemed necessary. The cost thereof will be deducted from any monies due or which may become due the Contractor under this Contract.
- (d) In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the PM/CM or Owner, shall act to prevent threatened damage, injury or loss.
- (e) Completed Work and stored products shall be suitably protected during unseasonable weather, to allow Work to proceed in a timely fashion. Work planned, or in progress, should be performed to minimize impact of adverse weather.

ARTICLE 22 - PROTECTION OF THE ENVIRONMENT

- (a) The Contractor shall be responsible for taking all measures required to minimize all types of pollution associated with the undertaking of the proposed Work, and shall abide by the requirements of all governmental agencies having jurisdiction over the Work or Contractor's Project operations.
- (b) Any area used or involved in the Project that is disturbed by the Contractor, shall be restored to original or better condition, even though such area is outside the limits of that specified for grading, grassing or landscaping.

ARTICLE 23 - PROTECTION, LOCATION AND RELOCATION OF UTILITIES

The Contractor shall notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor shall protect from damage all existing improvements or utilities at, or in proximity to, the site of the Work, and shall repair or restore any damage to such facilities resulting from failure to exercise reasonable care in the performance of Work. If the Contractor fails or refuses to repair any such damage promptly, the Owner may have the Work performed and charge the cost thereof to the Contractor.

Prior to the construction or installation of any proposed facility or pipeline, the Contractor shall expose all existing utilities true to their vertical and horizontal location, within the vicinity of the Work. In order to avoid conflicts between existing and proposed facilities or utilities, the Contractor shall either relocate the existing or proposed utility on a temporary or permanent basis or shall take whatever means necessary to protect the existing facilities or utilities during the installation of proposed utilities, as approved by the Owner. No separate payment will be made for the relocation of existing utilities or for any work associated with the protection of existing facilities or utilities.

ARTICLE 24 - SCHEDULES, REPORTS AND RECORDS

The Contractor shall submit to the Owner progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed as stipulated in the Supplementary Conditions.

ARTICLE 25 - DRAWINGS AND SPECIFICATIONS

The Drawings, Specifications, Contract Documents, and all supplemental documents, are considered essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to define, describe and provide for all Work necessary to complete the Project in an acceptable manner, ready for use, occupancy, or operation by the Owner.

The PM/CM will furnish the Contractor five copies of the Contract Documents, one copy of which the Contractor shall have available at all times on the Project site. Any additional copies will be furnished at additional cost.

In case of conflict between the Drawings and Specifications, the Specifications will govern. Figure dimensions on Drawings will govern over scale dimensions, and detailed Drawings will govern over general Drawings.

In cases where products or quantities are omitted from the Specifications, the description and quantities shown on the Drawings will govern.

Any materially differing site condition as between what is shown on the Drawings and Specifications and actually found on site shall be immediately reported to the PM/CM, in writing, prior to the commencement of Work at the site. Failure of the Contractor to notify the PM/CM, in writing, of the differing site condition prior to performance of Work at the site shall constitute a waiver of any claim for additional monies. Any Change Order necessitated by the

differing site condition shall be processed as provided under Article 29.

Any ambiguities or need for clarification of the Drawings or Specifications shall be immediately reported in writing to the PM/CM. Any such ambiguity or need for clarification will be handled by the PM/CM, in writing, as authorized by Article 11. No clarification of the Drawings and Specifications hereunder by the PM/CM will entitle the Contractor to any additional monies unless a Change Order has been processed as provided by Article 29 hereof.

Any work done by the Contractor following a discovery of such differing site condition or ambiguity or need for clarification in the Contract Drawings and Specifications, prior to a written report to the PM/CM, shall not entitle the Contractor to additional monies and shall be done at the Contractor's risk.

ARTICLE 26 - SURVEYS

The Owner will furnish AutoCAD files of the Construction Drawings to assist with construction layout of the Work. The County's benchmark information will be provided. From this information, unless otherwise specified in the Contract Documents, the Contractor shall develop and make all detailed surveys needed for construction, such as alignment, slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

ARTICLE 27 - TESTING, INSPECTION AND REJECTION OF WORK

- (a) Testing of Materials: Unless otherwise specifically provided for in the Specifications, the inspection and testing of products to be incorporated in the Work at the site shall be made by bureaus, laboratories, or agencies approved by the Owner; the cost of such inspection and testing shall be paid by the Contractor. The Contractor shall furnish evidence, satisfactory to the Owner, that the products have passed the required tests prior to their incorporation into the Work. The Contractor shall promptly segregate and remove rejected products from the site of the Work.
- (b) Inspection: The Contractor shall furnish the Owner with every reasonable facility for ascertaining whether or not the Work performed and products used are in accordance with the requirements and intent of the Specifications and Contract Documents. No Work shall be done or products used without suitable inspection by the Owner or the Owner's representative. Failure to reject any defective Work or product shall not in any way prevent later rejection when such defect is discovered, or obligate the Owner to final acceptance.
- (c) Authority and Duties of the Resident Inspector: The Resident Inspector will be authorized to inspect all Work done and all products furnished, including preparation, fabrication and manufacture of the products to be used, but the Resident Inspector will not be authorized to alter or waive any requirements of the Contract Documents. The Resident Inspector may reject products or suspend the Work until any question at issue can be referred to and decided by the Owner. The responsibility of the Contractor is not lessened by the presence of the Resident Inspector.

- (d) Rejection of Work and Materials: All products furnished, and all Work done that is not in accordance with the Drawings or Specifications or that is defective will be rejected. All rejected products or Work shall be removed immediately. If rejected products or Work is not removed within 48 hours, the PM/CM will have the right and authority to stop the Work immediately and will have the right to arrange for the removal of said rejected products or Work at the cost and expense of the Contractor. All rejected products or Work shall be replaced with other products or Work which conforms with the Drawings and Specifications.
- (e) Contractor's Responsibilities: Inspection of the Work will not relieve the Contractor of any obligations to fulfill the Contract and defective Work shall be made good regardless of whether such Work has been previously inspected by the Owner and accepted or estimated for payment. The failure of the Owner to reject improper Work shall not be considered a waiver of any defect which may be discovered later, or for Work actually defective.

ARTICLE 28 - CONTRACT TIME AND LIQUIDATED DAMAGES

The Contract Time and Liquidated Damages shall be defined in the Instructions to Bidders.

The Contractor shall proceed with the Work at a rate of progress which will insure completion within the Contract Time. It is expressly understood and agreed by and between the Contractor and the Owner, that the Contract Time for 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.

If the Contractor shall fail to perform the Work required within the Contract Time, or extended Contract Time if authorized by Change Order, then the Contractor shall pay to the Owner the full amount of liquidated damages specified in the Contract Documents for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

The Contractor shall not be charged with liquidated damages or any excess cost when the delay in performance of the Work is due to the following and the Contractor has promptly given written notice of such delay to the Owner and PM/CM:

- (a) To any preference, priority or allocation order duly issued by the Owner.
- (b) 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, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and,
- (c) To any delays of subcontractors occasioned by any of the causes specified in paragraphs (a) and (b).

ARTICLE 29 - CHANGES IN THE CONTRACT

- (a) Changes in the Work: The Owner may at any time, as the need arises, order changes within the scope of the Work without invalidating the Contract Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the Work, an equitable adjustment will be authorized by Change Order.

The Owner, also, may at any time, by issuing a field order, make changes in the details of the Work. These changes by field order will not affect Contract Time or Contract Price. The Contractor shall proceed with the performance of any changes in the Work so ordered by the Owner, unless the Contractor believes that such field order entitles Contractor to a change in Contract Price or Contract Time or both, in which event Contractor shall give the PM/CM immediate, written notice thereof and if required by the Owner, an immediate estimate of the direct cost of Work as outlined in (b) below, after the receipt of the ordered change, and the Contractor shall not execute such changes pending the receipt of an executed Change Order or further written instruction from the Owner.

Should the Contractor encounter, or the Owner discover, during the progress of the Work, subsurface or latent conditions at the site materially differing from those shown on the Drawings or indicated in the Specifications, or unknown conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Drawings and Specifications, the Owner shall immediately be notified in writing of such conditions before they are disturbed. The Owner will thereupon promptly investigate the conditions.

If the Owner finds that conditions do so materially differ, or are of an unusual nature, and upon written request of the Contractor, an equitable adjustment will be authorized by Change Order.

If the Contractor does not immediately notify the Owner in writing of the belief that a field order, additional work by other contractors or the Owner, or subsurface, latent or unusual unknown conditions entitles the Contractor to a Change Order, no consideration for time or money will be given the Contractor.

The Owner may, with the Contractor's concurrence, elect to postpone the issuance of a Change Order until such time that a single Change Order of substantial importance can be issued incorporating several changes. In such cases, the Owner will indicate this intent for each change in the Contract in a written response to the Contractor's request for a change, following agreement by the Owner and Contractor on the change's scope, price and time.

- (b) Changes in Contract Price: The Contract Price may be changed only by a Change Order. The value of any Work covered by a Change Order for increase or decrease in the Contract Price will be determined by one or more of the following methods, in the order of precedence listed below:

- (1) By estimating the number of unit quantities of each part of the Work which is changed (either increased or decreased) and then multiplying the estimated number of such unit quantities by the price Bid (which price shall include the Contractor's overhead and profit) for a unit quantity thereof.
- (2) The Owner will fix the total lump sum value of the change in the Work of the Contractor following the Contractor's submittal, within a reasonable time, of an estimate of the direct cost of the Work. The direct cost estimate will be added to, or deducted from, the Contract Price (which price will include the Contractor's overhead and profit as outlined below). If the Contractor does not submit a cost estimate of the Work in a reasonable time or if the Owner and Contractor do not reach agreement on the cost, the Owner may fix the total lump sum value at a reasonable amount. On any lump sum change which involves a net credit to the Owner, no allowance for overhead and profit will be figured.
- (3) By ordering the Contractor to proceed with the Work and to keep and present, in such form as the Owner may direct, a correct account of the cost of the change together with all vouchers therefor. The cost hereunder will only include an allowance for overhead and profit as outlined below.

For the Work performed in item (2) or (3) above, payment will be made for the documented actual direct cost of the following:

(aa) Labor, including foremen, for those hours they are assigned and participating in the Work covered by the change order (actual direct payroll cost of wages). The Contractor shall furnish, if required by the Owner, certified payrolls to verify wages. All labor related costs will be included in a 30 percent markup of the cost of direct payroll wages. This refers to the Contractor's specific labor wages.

(bb) Material delivered and used on the designated Work, including sales tax, if paid for by the Contractor and as verified by original invoices or otherwise verifiable to the Owner's acceptance.

(cc) Rental, or ownership cost of equipment, including necessary transportation of equipment, having a purchase value in excess of \$300.00. Rental or ownership cost will be allowed for only those hours during which the equipment is required on the project site. Cost allowances will not exceed the rates defined as follows: the hourly rate, for equipment not used exclusively in the change to the scope of work, will be the monthly rate, as printed in the current Rental Blue Book for Construction Equipment published by Dataquest, divided by 176; the rate, for equipment used exclusively for those tasks identified in the change to the scope of work, will be the daily, weekly or monthly rate, used singularly or in combination, which will provide the lowest total

cost. The rates will be modified by the Rate Adjustment Table factors to reflect a depreciation allowance indexed to the year a machine was originally manufactured and sold. The rates will be adjusted to account for regional differences in annual use hours, cost of labor, freight, taxes, etc. The amount by which basic rates will be increased or decreased is shown on the adjustment maps included in the "Blue Book".

The equipment use period will begin only at the time equipment is unloaded at the site of the changed work, will include each day that the equipment is required at the site of the changed work and will terminate at the end of the day on which the use of such equipment becomes unnecessary, plus reasonable transportation time. The maximum time to be paid per day will not exceed eight hours unless the equipment is in operation for a longer time. The time which will be paid for per day, for equipment not used exclusively in the change to the scope of work, will be the hours which the equipment was actually in operation on the changed work.

In addition to the actual costs in items (aa) through (cc) above, there will be, for the Contractor actually performing the work, a fixed fee of 16 percent for bond, insurance, overhead and profit added to the cost of Items (aa), (bb) and (cc), above.

If all or a portion of the Change Order is performed by a subcontractor, payment will be made for the documented actual direct cost as outlined in (aa), (bb) and (cc), above. A fixed fee of 16 percent for bond, insurance, overhead and profit will be added to the cost of (aa), (bb) and (cc) of the subcontractor's work only.

A fixed fee of 10 percent will be added to the subcontractor's Work for the Contractor's administrative handling of portions of the Work that are performed by an approved subcontractor. No additional fixed fee will be allowed for the Contractor's or a subcontractor's administrative handling of Work performed by a subcontractor's subcontractor, unless by written permission from the Owner. All other costs not specifically listed above are considered to be included in the fixed fee.

- (4) The Contractor shall, when required by the Owner, furnish the Owner with an itemized breakdown of the quantities and prices used in computing the value of any change that might be ordered, in a printed format, and with sufficient detail as required by the Owner.
- (c) Changes in Contract Time: The Contract Time may be changed only by a Change Order. Changes in the Work described in (a) and any other claim made by the Contractor for a change in the Contract Time will be evaluated by the Owner with the assistance and input of the PM/CM and if the conditions warrant, an appropriate adjustment of the Contract Time will be made.

The Owner, when making these evaluations will take into consideration the amount and scope of Work which has been changed and will evaluate if the change in Work has affected the critical path as currently accepted on the progress schedule such that it would delay the completion of the Project. If after these evaluations have been made and in the sole opinion of the Owner, the Contractor is due an extension of time, then it will be granted by a Change Order and the Owner will pay the associated cost due the Contractor for direct field costs, only as outlined under Changes in Contract Price (aa) and (cc), exclusive of Item (bb), based on any delays to the overall Project. Extensions of time granted as a result of weather will not result in a change in Contract Price.

ARTICLE 30 - PAYMENTS AND COMPLETION

- (a) **Contract Price:** The Contract Price is a lump sum stated in the Contract Agreement and is the total amount payable by the Owner to the Contractor for the performance of the Work set forth in the Contract Documents.

It is understood that the Contractor shall provide and pay for all products, labor (including labor performed after regular working hours, on Sundays, or on legal holidays), equipment, tools, water, light, power, sewer, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, place into operation, and deliver the Work.

It is further understood that the Contractor's proposed construction schedule is based on a normal 40-hour, 5-day work week, less recognized holidays. If the Contractor desires to work in excess of this limit, the Contractor shall submit a written request to the Owner a minimum of five days prior to the desired work date. The Contractor shall be responsible for any additional expenses incurred by the Owner as a result of the extended work hours, including resident inspection overtime. The cost associated with resident inspector overtime will be deducted from the Contractor's monthly payment request.

- (b) **Breakdown of Cost:** Before the first application for payment the Contractor shall submit to the PM/CM a breakdown of cost for the various portions of the Work, including quantities if required by the PM/CM, aggregating the total Contract Price prepared in such form as specified or as the PM/CM and the Contractor may agree upon and supported by such data to substantiate its correctness as the PM/CM may reasonably require.

This schedule of values, when approved by the PM/CM, will be used only as a basis for the Contractor's application for payment; however, the payment schedule will correlate directly with the Overall Project Schedule (OPS) cost information, when applicable.

- (c) **Progress Payments:** At the end of each calendar month, the Contractor shall submit to the PM/CM an itemized application for payment supported by such other substantiating data as the PM/CM may reasonably require covering Work completed through the 20th day of the month. Progress payments shall be submitted to the PM/CM no later than the 25th of the month. Any progress payment submitted by the Contractor after the 5th of the month will be included in the following month's payment.

Application for payment may include, at the Contractor's option, the cost of products not yet incorporated into the Work which have been delivered to the site or to other storage locations authorized and approved by the PM/CM. The Owner reserves the right to accept or reject pay requests for stored materials, and to limit payments to those stored materials which, in the PM/CM's judgment, are necessary for continuing satisfactory Project progress.

Payment for stored products will be subject to the following conditions being met or satisfied:

- (1) The products shall be received in a condition satisfactory for incorporation in the Work, including manufacturer's storage and installation instructions.
- (2) The products shall be stored in accordance with the manufacturer's recommendations and in such manner that any and all manufacturer's warranties will be maintained and that they will not be damaged due to weather, construction operations or any other cause.
- (3) An invoice from the manufacturer shall be furnished for each item on which payment is requested. The request may include reimbursement for cost of delivery, limited to common carrier rates, to the site, but will not include the Contractor handling, on or off site, or for storage expense.
- (4) The Contractor shall, on request of the PM/CM, furnish written proof from the supplier of payment (less retention equal in percentage to that being retained by the Owner) for the products no later than 30 days after receipt of payment for same from the Owner.
- (5) Shop drawings, product data and samples, showing "No Exceptions Taken", has been received from the Contractor for that specific equipment or material.

The Contractor warrants that title to all Work and products covered by an Application for Payment, whether incorporated into the Project or not, will pass to the Owner upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances (except retention equal in percentage to that being retained by the Owner which may be withheld from suppliers and subcontractors to guarantee completion and performance).

- (d) Certificate for Payment: If the Contractor has made application for payment as provided above, the PM/CM will issue a Certificate for Payment to the Owner, with a copy to the Contractor, for such amount as the PM/CM determines to be properly due, or the PM/CM will state, in writing, itemized and specific reasons for withholding a Certificate as provided herein.

After the PM/CM has issued a Certificate for Payment, the Owner will pay to the

Contractor the amount covering Work completed plus stored products, less retention and less previous payments made.

No certificate for a progress payment, nor any progress payment, nor any partial or entire use of occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

- (e) Retention: The Owner will retain the following amounts from each properly certified estimate:
- (1) Until the value of the Work completed, including stored materials, is at least 50 percent of the Contract amount, 10 percent of the value of all Work satisfactorily completed, including stored materials.
 - (2) When the value of the completed Work totals at least 50 percent of the Contract amount, the Owner will discontinue retaining additional amounts provided the Work is progressing satisfactorily and there is no specific cause for retaining a larger sum. The total amount retained will be at least 5 percent of the Contract amount, adjusted for Change Orders, until the date of final payment.
 - (3) The Owner may elect to reinstate retention of 10 percent of the value of the Work completed if at any time the Contractor fails to make satisfactory progress or if there is other specific cause. Satisfactory progress is identified as conforming to the construction progress schedule as required in Article 24, as modified by the Supplementary Conditions. No form of collateral in lieu of cash will be acceptable as retainage. Amounts retained by the Contractor from payments due to suppliers and subcontractors (expressed as a percentage) shall not exceed that being retained by the Owner.
- (f) Payments Withheld: The PM/CM may decline to approve an Application for Payment and may withhold certificate, in whole or in part, as may be necessary to protect the Owner from loss because of:
- (1) Failure of the Contractor to make payments properly to subcontractors or for labor or products.
 - (2) Unsatisfactory prosecution of the Work by the Contractor either due to quality of the Work or if the Contractor is behind the currently approved construction schedule. When the above reasons for nonpayment are corrected, then payment will be made for amounts withheld because of such reasons, not later than the next payment. Completion and Final Acceptance shall be as stipulated in the Supplementary Conditions.

****END OF SECTION****

**SECTION 00800
SUPPLEMENTARY CONDITIONS**

GENERAL

The provisions in this Section of the Specifications shall govern in the event of any conflict between this Section and the General Conditions.

ARTICLE 1 - NOTICE OF AWARD OF CONTRACT

Article 1 - Notice of Award of Contract, of the General Conditions, is hereby modified to include the following:

Within 90 days after receipt of Bids, the Owner will notify the successful Bidder of the award of the Contract.

Should the Owner require additional time to award a Contract, the time may be extended by the mutual agreement between the Owner and the successful Bidder. If an award of Contract has not been made within 90 days from the Bid date or within the extension mutually agreed upon, the Bidder may withdraw the Bid without further liability on the part of either party.

ARTICLE 13 - LAWS AND REGULATIONS

Article 13 - Laws and Regulations, of the General Conditions is hereby modified to include the following:

Article 13, following first paragraph,

Where professional engineering work is required in connection with any of the components required by the Contract, all Bidders and component suppliers must ensure that there is full compliance with all applicable laws of the state of Georgia and any other state governing professional engineering. The Owner and PM/CM do not warrant that the name of an entity listed as an acceptable manufacturer is or will be in compliance with said laws.

ARTICLE 15 - NOTICE AND SERVICE THEREOF

Article 15 - Notice and Service Thereof, of the General Conditions is hereby modified to include the following:

- (a) All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Rockdale County Board of Commissioners, 943 Court Street, Conyers, Georgia 30012, Attn: Richard A. Oden, Chairman, Board of Commissioners.
- (b) Any notice to or demand upon the Owner shall be sufficiently given if delivered to the Office of said Chairman if delivered by the United States Mail in a sealed, postage-prepaid envelope, or delivered by facsimile transmission, followed by written confirmation, in each case addressed to said Chairman or to such other representative of

the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purposes.

- (c) The Contractor shall file all "Notices of Commencement" required for this Project in accordance with O.C.G.A. §44-14-361.5 et.seq. and §36-82-104 et.seq., as applicable. The Contractor shall respond to all requests for copies of a Notice of Commencement. Should the Owner or PM/CM receive such a request, this request will be forwarded to the Contractor for further handling. The name and address of the Owner shall be as stated in paragraph (c) of this Article. The name and general description of the Project shall be as stated in the Invitation to Bid.

ARTICLE 17 - LAND AND RIGHTS-OF-WAY

Article 17 - Lands and Rights-of-Way, of the General Conditions, is hereby modified to include the following:

No additional requirements.

ARTICLE 20 - INTERRUPTION OF FACILITY OPERATIONS

Article 20 - Interruption of Facility Operations, of the General Conditions, is hereby modified to include the following:

Interruption of any plant operations will not be permitted unless the Contractor has obtained prior approval from the Owner. The Owner/PM/CM shall be notified at least two weeks in advance and in writing, of the date, time and duration of such interruption. The Contractor shall pay all fines that may be imposed on the Owner for any interruptions without prior approval.

ARTICLE 24 - SCHEDULES, REPORTS AND RECORDS

Article 24 - Schedules, Reports and Records, of the General Conditions, is hereby modified to include the following:

- (a) The Contractor shall submit to the Owner progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed as stipulated in the various sections of these Specifications.
- (b) Immediately after execution of the Contract by the Owner, and before the first partial payment is made, the Contractor shall deliver to the Owner a construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the Progress Schedule.
- (c) An updated schedule and an updated Schedule of Submittals shall be presented with each partial payment request. Lack of an updated schedule and/or an updated Schedule of Submittals will delay processing of the pay request until receipt of the updated schedule and/or an updated Schedule of Submittals.

- (d) If the schedule reflects a completion date prior to the completion date established by the Contract Agreement, this shall afford no basis to claim for delay should the Contractor not complete the Work prior to the projected completion date. Instead all "float" between the completion date in the Contractor's schedule and the completion date established in the Contract Agreement shall belong to and be exclusively available to the Owner. Should a change order be executed with a revised completion date, the progress schedule shall be revised to reflect the new completion date.
- (e) The Contractor shall maintain on the Project site, a complete set of up-to-date Record Documents.
- (f) Project Coordination Meetings: The General Contractor shall participate in Project Coordination Meetings to be held on the site monthly, or more often if conditions warrant, to establish the current state of completion and revise the schedule as necessary. The Project Coordination Meeting will be conducted by the PM/CM.

(g) Contractor's Responsibilities

- (1) Implement the detailed Near-Term Schedule of activities to the fullest extent possible between Project Coordination Meetings.
- (2) Contractor shall prepare and provide one copy of the Contractor's Daily Report to the PM/CM by 10:00 a.m. of the day following the Report date. This Daily Report will contain, as a minimum, the weather conditions; number of workers by craft, including supervision and management personnel on site; active and inactive equipment on site; work accomplished by CPM activity item; problems; and visitors to the jobsite.
- (3) If a current activity or series of activities on the OPS is behind schedule and if the late status is not due to an excusable delay for which a time extension would be forthcoming, the Contractor shall attempt to reschedule the activity to be consistent with the Overall Project Schedule so as not to delay any of the Contract milestones. The Contractor agrees that:

(aa) The Contractor shall attempt to expedite the activity completion so as to have it agree with the OPS. Such measures as the Contractor may choose shall be made explicit during the Project Coordination Meeting.

(bb) If, within two weeks of identification of such behind-schedule activity, the Contractor is not successful in restoring the activity to an on-schedule status, the Contractor shall:

- i. Carry out the activity with the scheduled crew on an overtime basis until the activity is complete or back on schedule.
- ii. Increase the crew size or add shifts so the activity can be

completed as scheduled.

- iii. Commit to overtime or increased crew sizes for subsequent activities, or some combination of the above as deemed suitable by the PM/CM.

These actions shall be taken at no increase in the Contract amount.

- (4) Maintain a current copy of all construction schedules on prominent display in the Contractor's field office at the Project site.
- (5) Cooperate with the Owner or Owner's representative in all aspects of the Project Scheduling System. Failure to implement the Project Scheduling System or to provide specified schedules, diagrams and reports, or to implement actions to re-establish progress consistent with the OPS may be causes for withholding of payment.

ARTICLE 30 - PAYMENTS AND COMPLETION

Article 30 - Payments and Completion, of the General Conditions, is hereby modified to include the following:

- (g) Completion: ALL WORK REQUIRED BY THE CONTRACT DOCUMENTS, CONTRACT DRAWINGS AND SPECIFICATIONS MUST BE COMPLETED BEFORE THE FINAL INSPECTION IS PERFORMED. This includes, but is not limited to, the following:
 - (1) Performing tests as described in the detailed Specifications.
 - (2) Removing temporary plugs, bulkheads, bypasses, etc., and diverting flow into the facility when approved by the PM/CM.
 - (3) Grassing and restoration of the work area.

Upon completion of all work required, the Contractor shall submit completed Record Drawings to the PM/CM and request, in writing, that the final inspection be performed. The PM/CM will arrange for final inspection of the work by the Owner and Designer. If the PM/CM finds the work of the Contractor complete and acceptable in accordance with the provisions of the Contract Documents and that the Record Drawings accurately depict the complete work, PM/CM will recommend to the Owner that the job be accepted and that final payment be made.

In the event that the final inspection reveals deficiencies in meeting the Contract requirements, the Contractor shall complete all remaining items of work, and make adjustments found to be necessary. Upon receipt of written notice from the Contractor that the work is complete and ready for re-inspection, the PM/CM will arrange a final inspection.

The Contractor will be notified, in writing, by the Owner of the final acceptance of the work. The date of final acceptance shall be the termination date for the Contractor's liability for the physical properties of the facilities and the beginning of the warranty period.

Before final payment can be made, the Contractor must certify, in writing, to the Owner that all payrolls, materials bills, and other indebtedness connected with the work have been paid. If requested by the PM/CM, the Contractor shall provide release of lien documentation from subcontractors or suppliers.

Final payment will not be made if there is disputed indebtedness or if there are liens upon the property.

If upon completion of all work there is disputed indebtedness or there are liens upon the property, semi-final payment may, be made, at the Owner's option, in accordance with the following provisions:

- (1) The Owner will retain an amount equal to the disputed indebtedness and/or liens upon the property including all related cost and interest in connections with said disputed indebtedness and liens which the Owner may be compelled to pay upon and subsequent adjudication.
- (2) The Contractor shall certify to those items of work not disputed that all payables, materials bills, and other indebtedness connected with the work have been paid or otherwise satisfied.

The making of the final payment shall constitute a waiver of all claims by the Owner, other than those for faulty work covered by and appearing within the warranty period.

The acceptance of final payment shall constitute a waiver of all claims by the Contractor, except those previously made, in writing, and still unsettled.

(h) Prompt Payment Clause

- (1) Owner and Contractor agree that all partial payments and final payments shall be subject to the Georgia Prompt Pay Act, as originally enacted and amended, and as set forth in O.C.G.A. §§ 13-11-1 through 13-11-11, except as provided below to the extent authorized by law:
 - (aa) Interest Rate: For purposes of computing interest on late payments, the rate of interest shall be Georgia Fund One one-half percent per month^[PR1] or a pro-rata fraction thereof on the unpaid balance as may be due.
 - (bb) Payment Periods:
 - i. When the Contractor has performed in accordance with the provisions of these Contract Documents, the Owner shall pay the Contractor within 45 days of receipt by the Owner or the Owner's representative of any properly completed Application for Payment,

based upon work completed or service provided pursuant to the terms of these Contract Documents.

- ii. When a subcontractor has performed in accordance with the provisions of its subcontract and the subcontract conditions precedent to payment have been satisfied, the Contractor shall pay to that subcontractor and each subcontractor shall pay to its subcontractor, within ten days of receipt by the Contractor or subcontractor of each periodic or final payment, the full amount received for such subcontractors work and materials based on work completed or service provided under the subcontract, less retainage expressed as a percentage, but such retainage shall not exceed that retainage being held by the Owner, provided that the subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete its work as the Contractor in its reasonable discretion may require, including but not limited to a payment and performance bond.

(cc) Interest on Late Payment: Except as otherwise provided in these Contract Documents and/or in O.C.G.A. § 13-11-5, if a periodic or final payment to the Contractor is delayed by more than the time allotted in Paragraph b. of this Prompt Payment Clause or if a periodic or final payment to a subcontractor is delayed more than ten days after receipt of periodic or final payment by the Contractor or subcontractor, the Owner, Contractor, or subcontractor, as the case may be, shall pay interest to its Contractor, or subcontractor beginning on the day following the due dates as provided in Paragraph b. of this Prompt Payment Clause at the rate of interest as provided herein. Interest shall be computed per month or a pro-rata fraction thereof on the unpaid balance. There shall be no compounded interest. No interest is due unless the person or entity being charged interest receives "Notice" as provided in Paragraph d. of this Prompt Payment Clause. Acceptance of progress payments or final payment shall release all claims for interest on said payments.

(dd) Notice of Late Payment and Request for Interest: Any person or entity asserting entitlement to interest on any periodic or final payment pursuant to the provisions of this Prompt Payment Clause shall provide "notice" to the person or entity being charged interest of the charging party's claim to interest on late payment. "Notice" shall be in writing, served by U.S. Certified Mail - Return Receipt Requested at the time the properly completed Application for Payment is received by the Owner or Owner's representative, and shall set forth the following:

- i. A short and concise statement that interest is due pursuant to the provisions of the Georgia Prompt Pay Act and this Prompt Payment Clause;

- ii. The principal amount of the periodic or final payment which is allegedly due to the charging party; and
- iii. The first day and date upon which the charging party alleges that said interest will begin to accrue, pursuant to the provisions of the Georgia Prompt Pay Act and this Prompt Payment Clause.

These "Notice" provisions are of the essence; therefore, failure to comply with any requirement as set forth in this Prompt Payment Clause precludes the right to interest on any alleged late payment to which said "Notice" would otherwise apply.

- (2) Integration with the Georgia Prompt Pay Act: Unless otherwise provided in these Contract Documents, the parties hereto agree that these provisions of this Prompt Payment Clause supersede and control all provisions of the Georgia Prompt Pay Act (O.C.G.A. §§ 13-11-1 through 13-11-11 (1994)), as originally enacted and as amended, and that any dispute arising between the parties hereto as to whether or not the provisions of this contract or the Georgia Prompt Pay Act control will be resolved in favor of these Contract Documents and its terms.

END OF SECTION

SECTION 01040
SUMMARY OF WORK

1 GENERAL

1.1 DEFINITIONS

- A. Definitions for common terms used in these documents are provided in Article 1, General Conditions/Supplemental Conditions.

1.2 SUMMARY

- A. The work to be performed consists of furnishing all labor, equipment, tools and materials required to construct the project, as set forth in the Bid Form, as shown on the Drawings and as specified herein. In general, the work includes construction of an extension of the existing steel casing that protects a sanitary sewer line across the Yellow River in Rockdale County.

1.3 GENERAL SCOPE OF WORK

- A. The Work can generally be described as consisting of:
1. Site preparation to access the site including clearing and grubbing, grading, and erosion and sedimentation control.
 2. Installation of a total of four piles for two new supports for new steel casing.
 3. Installation of beams on the new piles.
 4. Installation of steel casing on new supports around existing sanitary sewer line without taking the sewer line out of service.
 5. Grouting of annular space in steel casing around sewer pipe.
 6. Coating of all steel for corrosion protection.
 7. Restoration of shoreline and protection with filter fabric and rip rap.

1.4 ACCESS

- A. The existing sewer line is installed in an easement that was obtained when the sewer line was originally constructed.
- B. Contractor shall provide wood matts, timbers or other materials to provide access to the site. All materials used for temporary access to the site shall be removed upon completion of the project.

** END OF SECTION **

SECTION 01300
SUBMITTALS

1 GENERAL

1.1 DESCRIPTION

- A. The work under this Section includes submittals by CONTRACTOR of shop drawings, product data and samples required by the various sections of these Specifications to the ENGINEER.
- B. Definitions: Submittals are categorized as follows:
 - 1. Shop Drawings
 - a. Shop drawings shall include technical data, fabrication and erection/installation drawings, drawings, diagrams, procedure and methodology, performance curves, schedules, templates, patterns, test reports, calculations, instructions, measurements and similar information as applicable to the specific item for which the shop drawing is prepared.
 - b. Provide newly prepared information with graphic information at accurate scale (except as otherwise indicated) or appropriate number of prints hereof, with name or preparer (firm name) indicated. Show dimensions and note, which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards and special coordination requirements. Do not allow shop drawing copies without appropriate final "Action" markings by the ENGINEER to be used in connection with the Work.
 - c. Drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to sheet and detail, specification section or schedule shown on the Drawings.
 - 2. Product Data
 - a. Product data includes standard printed information on materials, products and systems, not specially prepared for this Project, other than the designation of selections from among available choices printed therein.
 - b. Collect required data into one submittal for each unit of work or system and mark each copy to show which choices and options are applicable to the Project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked and special coordination requirements.

1.2 MANUFACTURER'S LITERATURE

- A. Where content of submitted literature from manufacturers includes data not pertinent to this submittal, clearly indicate which portion of the contents is being submitted for the ENGINEER's review.
- B. Submit the number of copies which are required to be returned plus four copies which will be retained by the ENGINEER.
- C. Submit all samples in the quantity which is required to be returned plus one sample which will be retained by the ENGINEER.

1.3 COLORS

- A. Unless the precise color and pattern is specifically described in the Contract Documents, wherever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to the ENGINEER for review and selection.
- B. Unless all available colors and patterns have identical costs and identical wearing capabilities, and are identically suited to the installation, completely describe the relative costs and capabilities of each.

1.4 GENERAL SUBMITTAL REQUIREMENTS

A. Scheduling

1. Where appropriate in various required administrative submittals (listings of products, manufacturers, supplier and subcontractors, and in job progress schedule), show principal work-related submittal requirements and time schedules for coordination and integration of submittal activity with related work in each instance.

B. Coordination of Submittal Times

1. Prepare and transmit each submittal to the Engineer sufficiently in advance of performing related work or other applicable activities, so the installation will not be delayed or improperly sequenced by processing times, including non-approval and re-submittal (if required). Coordinate with other submittals, testing, purchasing, delivery and similar sequenced activities. No extension of time will be authorized because of Contractor's failure to transmit submittals to the Engineer sufficiently in advance of the work.

C. Sequencing Requirements

1. As applicable in each instance, do not proceed with a unit of work until submittal procedures have been sequenced with related units of work, in a manner which will ensure that the action will not need to be later modified or rescinded by reason of a subsequent submittal which should have been processed earlier or concurrently for coordination.

D. Preparation of Submittals

1. Provide permanent marking on each submittal to identify project, date, Contractor, subcontractor, submittal name and similar information to distinguish it from other submittals. Show Contractor's executed review and approval marking and provide a 3" x 5" space for the Engineer's "Action" marking. Package each submittal appropriately for transmittal and handling. Submittals which are received from sources other than through the Contractor's office will be returned "without action."

E. Transmittal Identification

1. Number transmittals in sequence for each Division of the Specifications. The number before the dash indicates the Section of the Specifications, and the number after the dash is the sequence number of the transmittal (15140-1 would be the first transmittal applicable to Section 15140 of the Specifications, 15140-2 would be the second transmittal for Section 15140, etc.)
2. Identify re-submittals with a letter of the alphabet following the original number, using "A" for the first re-submittal, "B" for the second re-submittal, etc. A re-submittal affecting transmittal 15140-1 would then be numbered 15140-1A. The number 15140-1 would then be entered in the space "Previous Transmittal Number," which is left blank except on re-submittals. Re-submittals shall include all previous submittal information. No partial submittals will be accepted.

1.5 ROUTING OF SUBMITTALS

A. Submittals and routine correspondence shall be routed as follows:

1. Supplier to Contractor (through representative if applicable) for preliminary check.
2. Contractor to Consulting Engineer for general review or comment.
3. Consulting Engineer to Contractor.
4. Contractor to Supplier.

1.6 ADDRESS FOR COMMUNICATIONS

- ### A. Rockdale Water Resources
- Attn: Mr. David Cervone, P.E.
1329 Portman Drive, Suite H
Conyers, GA 30012
(770) 278-7432

1.7 SUBMITTAL COPIES REQUIRED

A. Shop Drawings, Product Data, and Miscellaneous Submittals

1. All submittals marked "No Exception Noted" or "Furnish as Corrected" will be distributed as follows:
 - a. For Engineer 1 copy
 - b. For Contractor 2 copies
 - c. For Field Inspection Office 1 copy
 - d. For Owner 1 copy
 - e. Total 5 copies
2. To the above number may be added additional copies as required by the Contractor.
3. The Engineer will mark all copies of each shop drawing. One will be retained in the Engineer's office, one sent to the Field Inspection office, one will be retained for the Owner and the remaining copies sent to the Contractor for his records and distribution.
4. All submittals marked "Revise and Resubmit" or "Rejected" will be distributed as follows:
 - a. For Engineer 1 copy
 - b. For Contractor 2 copies
 - c. Total 3 copies

B. For non-approval items, such as parts lists and preliminary operation and maintenance manuals, 2 copies are required, unless specified otherwise:

1. For Engineer File 1 copy
2. For Contractor 1 copy
3. Total 2 copies

C. Samples

1. Submittal
 - a. At Contractor's option, provide preliminary submittal of a single set of samples for the Engineer's review and "action." Otherwise, initial submittal is final submittal unless returned with "action" which requires re-submittal. Submit two sets of samples in final submittal; one set will be returned.
2. Quality Control Set
 - a. Maintain returned final set of samples at project site, in suitable condition and available for quality control comparisons by Engineer and by others.

1.8 REVIEW OF SUBMITTALS

A. Review Time

1. Allow 10 working days from the date the submittal is received in the Engineer's office for the Engineer to review and respond to each submittal, except allow longer periods where processing must be delayed for coordination with subsequent submittals. The Engineer will advise the Contractor promptly when it is determined that a submittal being processed must be delayed for coordination.

B. Engineer's Action

1. "No Exception Noted" - Indicates the drawings have been reviewed for conformance with the contract documents and no exceptions have been taken. Proceed with the work.
2. "Furnish as Corrected" - Indicates the drawings have been reviewed for conformance with the contract documents and work may proceed in accordance with all comments. Re-submittal will not be required.

3. "Revise and Resubmit" - Indicates the drawings have been reviewed for conformance with the contract documents, and work may not proceed. After items to which exceptions have been taken are corrected, Contractor shall again submit copies for review.
4. "Rejected" - Indicates the drawings have been reviewed for conformance with the contract documents and are too incomplete or in an unacceptable condition for review. A notation will be made on the shop drawings as to the exceptions taken. Drawings shall be revised and resubmitted for review before proceeding with the work.
5. "Submit Specific Item" - Indicates that one or more items in the submittal were missing or incomplete. Work may commence on any items to which no exceptions were taken; missing or incomplete items must be submitted as noted.

1.9 DAILY REPORTS

- A. The Contractor shall submit daily reports to the Engineer. Reports shall contain, but not be limited to, a list of all employees and subcontractors by trade that worked on the job that day, received equipment and materials, survey stake-out data, erosion control maintenance updates.

2 EXECUTION

2.1 CONTRACTOR'S COORDINATION OF SUBMITTALS

- A. Prior to submittal for the ENGINEER review, the CONTRACTOR shall use all means necessary to fully coordinate all material, including the following procedures:
 1. Determine and verify all field dimensions and conditions, catalog numbers and similar data.
 2. Coordinate as required with all trades and all public agencies involved.
 3. Submit a written statement of review and compliance with the requirements of all applicable technical Specifications as well as the requirements of this Section.
 4. Clearly indicate in a letter or memorandum on the manufacturer's or fabricator's letterhead, all deviations from the Contract Documents.
- B. Each and every copy of the submittal data shall bear the CONTRACTOR's stamp showing that it has been so checked. Shop drawings submitted to the ENGINEER without the CONTRACTOR's stamp will be returned to the CONTRACTOR for conformance with this requirement.
- C. The OWNER may deduct from the Contract amount costs associated with having to review a particular shop drawing, product data, or sample more than two times in order to receive an acceptable disposition.
- D. Grouping of Submittals
 1. Unless otherwise specifically permitted by the ENGINEER, make all submittals in groups containing all associated items.
 2. No review will be given to partial submittals of shop drawings for items which interconnect and/or are interdependent. It is the CONTRACTOR's responsibility to assemble the shop drawings for all such interconnecting and/or interdependent items, check them and then make one submittal to the ENGINEER along with CONTRACTOR's comments as to compliance, non-compliance or features requiring special attention.
- E. Transmittal of Submittals
 1. All submittals shall be submitted using a transmittal form similar to one furnished by the ENGINEER.
- F. Shop Drawing Details
 1. All details on shop drawings shall show clearly the relation of the various parts of the main members and lines of the structure. Where correct fabrication of the work depends upon

field measurements, such measurements shall be made and noted on the drawings before being submitted for review.

G. Deviations

1. If a shop drawing shows any deviation(s) from the requirements of the Contract Documents, the CONTRACTOR shall make specific mention of the deviation(s) on the transmittal form and provide a written description of the deviation(s) on separate 8-1/2 X 11 paper attached to the transmittal form.

H. Maintenance and Lubrication Schedules

1. Submittals for equipment specified under Divisions 11, 13, 14, 15, and 16 shall include maintenance and lubrication schedules for each piece of equipment.
2. Schedule of Submittals: As detailed in the General Conditions. The schedule shall provide for submittal of items which relate to one another to be submitted concurrently.

2.2 CONTRACTOR CERTIFICATION

- A. Each shop drawing, sample, and product data submitted by the CONTRACTOR shall have affixed to it the following certification statement:
- B. Certification Statement: By this submittal, I hereby represent that all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data have been determined and verified, and each item has been checked and coordinated with other applicable shop drawings and all Contract requirements. Further, these determination, verification, check, and coordination activities have been conducted by qualified personnel under my supervision.

2.3 TIMING OF SUBMITTALS

- A. Make all submittals in advance of scheduled dates for installation to provide all required time for reviews, for securing necessary reviews, for possible revision and resubmittal, and for placing orders and securing delivery.
- B. In scheduling, allow 10 working days for the ENGINEER's review following the receipt of the submittal.
 1. Acceptable submittals will be marked "No Exceptions Taken". Three copies will be retained by the ENGINEER for ENGINEER's and the OWNER's use and the remaining copies will be returned to the CONTRACTOR.
 2. Submittals requiring minor corrections before the product is acceptable will be marked "Make Corrections Noted". The CONTRACTOR may order, fabricate, ship, and install the items included in the submittals, provided the indicated corrections are made. Resubmission is not required on a "Make Corrections Noted" submittal disposition.
 3. Submittals marked "Amend and Resubmit" must be revised to reflect required changes and the initial review procedure must be repeated.
 4. The "Rejected" notation is used to indicate products which are not acceptable. Upon return of a submittal so marked, the CONTRACTOR shall repeat the initial review procedure utilizing acceptable products.
 5. Only three copies of items marked "Amend and Resubmit" and "Rejected" will be reviewed and marked. One copy will be retained by the ENGINEER and the other two copies will be returned to the CONTRACTOR for resubmittal.
- C. No work or products shall be installed without a drawing or submittal bearing either the "No Exceptions Taken" or "Make Corrections Noted" notation. The CONTRACTOR shall maintain at the job site a complete set of shop drawings bearing the ENGINEER's stamp. Fabrication performed, materials purchased or on-site construction accomplished which does not conform with a properly and completely processed submittal shall be remedied by the CONTRACTOR with no liability to the OWNER. The OWNER will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity. Project work, materials, fabrication, and installation shall conform with properly and completely processed shop drawings, applicable samples, and/or product data.

- D. Substitutions: In the event the CONTRACTOR obtains the ENGINEER's approval for the use of products other than those which are listed first in the Contract Documents, the CONTRACTOR shall, at the CONTRACTOR's own expense and using methods approved by the ENGINEER, make any changes to structures and piping that may be necessary to accommodate these products.
- E. Use of the "No Exceptions Taken" or "Make Corrections Noted" notation on shop drawings or other submittals is general and shall not relieve the CONTRACTOR of the responsibility of furnishing products of the proper dimension, size, quality, quantity, materials and all performance characteristics, to efficiently perform the requirements and intent of the Contract Documents. The ENGINEER's review is intended only to review conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The CONTRACTOR is responsible for dimensions to be confirmed and correlated at the job site. The CONTRACTOR is also responsible for information that pertains solely to the fabrication processes or to the technique of construction and for the coordination of the work of all trades.

** END OF SECTION **

SECTION 01500
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1 GENERAL

1.1 SCOPE

- A. Temporary facilities required for this work include, but are not necessarily limited to:
 - 1. Temporary utilities required by CONTRACTOR such as water, telephone, and electricity.
 - 2. Sanitary facilities.
 - 3. Temporary enclosures and construction facilities.

1.2 GENERAL

- A. Sanitary facilities and potable water shall be made available by the CONTRACTOR on the Project site on the first day that any activities are conducted on site. The other facilities shall be provided as the schedule of the Project warrants.
- B. Maintenance: Use all means to maintain temporary facilities in proper and safe condition throughout progress of the Work. In the event of loss or damage, immediately make all repairs and replacements necessary, at no additional cost to the OWNER.
- C. Removal: Remove all such temporary facilities and controls as appropriate relative to the progress of the Work, and as the requirements of the Contract provide.

1.3 TEMPORARY UTILITIES

A. General

- 1. Provide and pay all costs for electricity and sanitary utilities required for the performance of the Work.
- 2. If water service is available to the site at the time of construction, OWNER will provide tap and meter at the curb and CONTRACTOR will provide service line and pay for water at standard local rates.

1.4 CONTRACTOR'S USE OF PREMISES

- A. Lands furnished by OWNER upon which CONTRACTOR and their respective Subcontractors shall perform the Work are as shown in the Contract Drawings.
 - 1. CONTRACTOR shall coordinate use of premises with the OWNER. The CONTRACTOR shall be responsible for all site activities conducted under the terms of this contract and/or under their purview.

1.5 PERMITS

- A. Permits, Licenses, or Approvals: The CONTRACTOR will be responsible for acquiring any permits that are required for this project/purchase. OWNER will waive fees on all permits issued by OWNER. This project is considered to be emergency work due to the potential for the existing sanitary sewer to fail.
- B. The OWNER will obtain permits required from agencies of the State of Georgia and the United States of America.

1.6 PROTECTION OF WORK AND PROPERTY

- A. Comply with applicable Federal, State, and Local health, safety and environmental laws pertinent to this Work, or referenced by the Contract provisions, while on OWNER's property.
- B. During the performance of the Work, CONTRACTOR is responsible for adapting his means, methods, techniques, sequences and procedures of construction to allow effective and timely prosecution of the Work. In order to accomplish this, it may be necessary for the CONTRACTOR to plan, design, and provide various temporary services, utilities, temporary piping and heating, access, and similar items which will be included within the Contract Price.

1.7 VEHICULAR TRAFFIC

- A. CONTRACTOR's vehicular traffic must comply with OWNER's requirements. CONTRACTOR will coordinate vehicular traffic in a manner that will maximize overall access to the site and avoid interference with other CONTRACTORS working at the site.

1.8 PROJECT SIGN

- A. Should the CONTRACTOR desire to post their business name for delivery purposes, the CONTRACTOR may place an appropriately sized sign near project access points.

2 EXECUTION

2.1 RESPONSIBILITIES

- A. CONTRACTOR shall provide temporary facilities and controls as specified throughout this Section for use by CONTRACTOR's personnel at the site, or sites of the Work, until the project is complete.
- B. CONTRACTOR is solely responsible for temporary facilities and controls removal and restoration of the affected area when the temporary facilities and controls are no longer needed or required by virtue of the Work being complete.
- C. CONTRACTOR shall include in his Bid the costs associated with the temporary facilities and controls that are to be provided.

2.2 STORAGE YARDS AND BUILDINGS

- A. Temporary Storage Yards: CONTRACTOR may construct temporary storage yards for staging and storage of its own products, equipment, and materials. Location is subject to ENGINEER's approval.
- B. Temporary Storage Trailers: Trailers may be utilized for temporary storage. Location is subject to ENGINEER's approval.

2.3 SITE SECURITY

- A. The CONTRACTOR shall be responsible for security of their temporary facilities, equipment, tools, vehicles, materials, work-in-place, and any other property located on site for the duration of this Contract.
- B. The CONTRACTOR shall remove all temporary facilities, equipment, tools, vehicles, materials, and any other property remaining upon completion of the Work, and no later than close-out of the Contract.
- C. Coordination: Coordinate traffic routing with that of others working in the same or adjacent areas.

2.4 CLEANING DURING CONSTRUCTION

- A. The site shall be maintained in a neat, clean, and orderly manner to allow and ensure ready access, safe working and observation conditions, and a workmanlike appearance. Debris, waste materials, refuse, and rubbish shall be collected and properly disposed of daily.

**** END OF SECTION ****

SECTION 01700
CONTRACT CLOSEOUT

1 GENERAL

1.1 DESCRIPTION

- A. Contract closeout is the process that recognizes Substantial Completion, the transition of operations to the OWNER, and Final Completion. As the Work nears Substantial Completion, sequences of activities and their responsibilities need to be identified, planned, scheduled, and effectively implemented to facilitate a smooth completion of the overall project.
- B. This section defines the process by which the transition from construction to plant operations will be affected. Terms, roles, responsibilities, and actions will be identified herein.

1.2 RELEASES FROM AGREEMENTS

- A. Furnish OWNER written releases from any and all subcontractors or suppliers, or the like, who performed Work or supplied labor, materials, and/or services pursuant.
- B. In the event CONTRACTOR is unable to secure written releases, inform the OWNER of the reasons.

1.3 FINAL INSPECTION

- A. OWNER or its representatives will examine the site and/or Work, and OWNER will direct CONTRACTOR to complete Work that may be necessary to satisfy terms of the agreement.

2 PRODUCTS (NOT USED)

3 EXECUTION

3.1 SUBSTANTIAL COMPLETION

- A. Substantial Completion is defined in the General Conditions.
- B. The intended use for the project is to have the sanitary sewer line protected with the completed steel casing filled with grout and coated to provide protection against corrosion.
- C. All required certificates of proper installation shall be properly completed and submitted to the ENGINEER prior to the Work being eligible for declaration as substantially complete.
- D. The balance of Work remaining, and all unsatisfactory work items shall be identified, compiled, and submitted to the ENGINEER, along with a schedule of completion for all listed activities prior to the Work being eligible for declaration as substantially complete. The ENGINEER shall be afforded 5 working days to review the index and schedule and preparation of the punch list. Upon development of the punch list, the Work may be declared substantially complete.
- E. The CONTRACTOR shall perform all punch list tasks in a manner which will not disrupt operations of the pump station.

3.2 PUNCHLIST

- A. Development of the punch list is the result of a survey of the CONTRACTOR's work by the ENGINEER and the OWNER performed prior to Substantial Completion. The objective of the survey is to identify the activities which are incomplete or work products that are unacceptable/unsatisfactory. The survey itself will corroborate the index of activities submitted by the CONTRACTOR.

3.3 FINAL ACCEPTANCE

- A. Final Acceptance is as addressed in the General Conditions.
- B. Completion of all punch list tasks/requirements is required prior to the Work being eligible for declaration as finally accepted.
- C. All record documents must be submitted to and accepted by the ENGINEER prior to the Work being eligible for declaration as finally accepted.
- D. All releases must be submitted to and accepted by the ENGINEER prior to the Work being eligible for declaration as finally accepted.

** END OF SECTION **

SECTION 01720
RECORD DOCUMENTS

1 GENERAL

1.1 SCOPE

- A. The work under this Section includes, but is not necessarily limited to, the compiling, maintaining, recording and submitting of project record documents as herein specified.
- B. Record documents to be prepared and submitted by the CONTRACTOR include, but are not limited to:
 - 1. As-built drawings
 - 2. Change orders and other modifications to the Contract
 - 3. ENGINEER field orders or written instructions, including Requests for Information (RFI) and Clarification Memorandums
 - 4. Reviewed shop drawings, product data and samples
 - 5. Test records
- C. The CONTRACTOR shall maintain on the Project site throughout the Contract Time an up to date set of Record Drawings.

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Storage
 - 1. Store documents and samples in the CONTRACTOR's field office, apart from documents used for construction.
 - 2. Provide files and racks for storage of documents.
 - 3. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with format of these Specifications.
- C. Maintenance
 - 1. Maintain documents in a clean, dry, legible condition and in good order.
 - 2. Do not use record documents for construction purposes.
 - 3. Maintain at the site for the Local Governing Authority one copy of all record documents.
- D. Make documents and samples available at all times for inspection by ENGINEER.
- E. Failure to maintain the Record Documents in a satisfactory manner may be cause for withholding of a certificate for payment.

1.3 QUALITY ASSURANCE

- A. Unless noted otherwise, Record Drawings shall provide dimensions, distances and coordinates to the nearest 0.1 foot.
- B. Unless noted otherwise, Record Drawings shall provide elevations to the nearest 0.01 foot for all pertinent items constructed by the CONTRACTOR.

1.4 SPECIFICATIONS

- A. Legibly mark each section to record changes made by Requests for information (RFI), field order, clarification memoranda, or by change order.

1.5 SUBMITTAL

- A. At contract closeout, deliver Record Documents to the ENGINEER.
- B. Accompany submittal with transmittal letter, in duplicate, containing:
 - 1. Date

2. Project title and number
3. CONTRACTOR's name and address
4. Title and number of each record document
5. Signature of CONTRACTOR or CONTRACTOR's authorized representative

2 PRODUCTS (NOT USED)

3 EXECUTION

3.1 AS-BUILT DRAWINGS

- A. The CONTRACTOR must maintain an up-to-date field record set of drawings by marking changes and other information directly on a set of contract drawings. The ENGINEER will periodically review the as-built drawings to confirm that the recorded information is current.
- B. Making Entries on As-Built Drawings (including Technical Specifications):
 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.
 - a. Color Coding:
 - 1) Green when showing information deleted from Documents.
 - 2) Red when showing information added to Documents.
 - 3) Blue and circled in blue to show notes.
 2. Date all entries.
 3. Clearly annotate who is making the entry.
 4. Call attention to entry by "cloud" drawn around area or areas affected.
 5. Legibly mark to record actual changes made during construction, including, but not limited to:
 - a. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.
 - b. Horizontal and vertical locations of existing and new underground facilities and appurtenances, and other underground structures, equipment, or Work. Reference to at least two measurements to permanent surface improvements.
 - c. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
 - d. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.
 - e. Changes made by Addenda and Field Orders, Work Change Directive, Change Order, Written Amendment, and ENGINEER's written interpretation and clarification using consistent symbols for each and showing appropriate document tracking number.
 6. Dimensions on Schematic Layouts: Show on as-built drawings, by dimension, the centerline of each run of items such as are described in previous subparagraph above.
 - a. Clearly identify the item by accurate note such as "cast iron drain, "galv. water," and the like.
 - b. Show, by symbol or note, vertical location of item ("under slab," "in ceiling plenum," "exposed," and the like).
 - c. Make identification so descriptive that it may be related reliably to the Technical Specifications.

7. Technical Specifications: Legibly mark to record and reference actual changes made during construction, including, but not limited to:
 - a. Approved changes to material, equipment or construction procedures referencing the document (RFI, CO, Addendum, Shop Drawing Submittal, etc.) that authorized the change.
 - b. Note all changes to material and equipment design, performance and maintenance criteria.

** END OF SECTION **

SECTION 02000
GENERAL CONSTRUCTION REQUIREMENTS

1 GENERAL

1.1 WORK INCLUDED

- A. The work described in this section applies to the Project in general. The Contractor shall comply with these requirements in performing all construction activities under the Contract. Provide labor, material, tools and equipment to perform site preparation work as indicated and specified.

1.2 CLEARING AND GRUBBING

- A. Where necessary, the Contractor shall clear and grub a sufficient width along the pipeline to permit installation of the work. The minimum width of the cleared and grubbed area shall be the width of the permanent easement and the maximum shall be the width of the construction easement. Disposal of all trees, shrubs and debris shall be the responsibility of the Contractor who shall comply with all state and local laws and regulations including any burning bans in effect at the time of construction. The Contractor shall clear only that area of the construction site that has adequate erosion and sedimentation control in place.
- B. The debris resulting from the clearing and grubbing operation shall be hauled to a disposal site secured by the Contractor and shall be disposed of in accordance with all requirements of federal, state, county and municipal regulations. No debris of any kind shall be deposited in any stream or body of water, or in any street or alley. No debris shall be deposited upon any private property except with written consent of the property owner. In no case shall any material or debris be left on the project, shoved onto abutting private properties or buried on the project. Trees, stumps, brush or other clearing debris may be used within the construction easement only if ground into wood chips and used as mulch for erosion and sedimentation control.

1.3 BARRICADES AND WARNING SIGNS

- A. The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lighting, danger signals and signs, provide sufficient number of watchmen and take all necessary precautions for the protection of the work and the safety of the public. Streets closed to traffic shall be protected by effective barricades on which shall be placed acceptable warning signs. All barricades and obstructions shall be illuminated at night, and all lights for this purpose shall be kept burning from sunset to sunrise.

1.4 VEHICULAR TRAFFIC CONTROL

- A. All work shall be planned and prosecuted by the Contractor to minimize interference with vehicular and pedestrian traffic. Whenever the work under this contract causes disruption to the normal flow of traffic or poses a potential hazard, the Contractor shall be responsible for implementing safety measures and traffic control procedures as outlined in the "Manual on Uniform Traffic Control Devices", latest edition, published by the U.S. Department of Transportation, Federal Highway Administration.
- B. At the beginning of the Project, Contractor shall contact the Owner and local authorities having jurisdiction over public roads to confirm procedures for road closures and shall comply with State and Local Laws and Regulations regarding closing or restricting the use of public streets or highways. No public or private road shall be closed or restricted except with permission of the proper authority. No resident or business shall be denied vehicular access to his property for any length of time except as necessary as determined by the Engineer.
- C. Whenever it is necessary to cross, close, or obstruct roads, driveways, and/or walks, whether public or private, Contractor shall provide suitable and safe bridges, detours, or other temporary expedients for accommodation of public and private travel.

- D. No loading or unloading of equipment or materials shall be allowed on the pavement of local public streets unless authorized by the Owner. During loading or unloading operations, flagmen and temporary signs shall be provided to regulate traffic. Mats shall be utilized beneath tracked equipment to prevent pavement damage. Pavement, curbing, sidewalks, or any other street component damaged by the Contractor shall be replaced by the Contractor at the Contractor's expense.
- E. On any utility crew working in the vicinity of public roads, Contractor shall employ workers that are trained and competent in traffic control and safety procedures.

1.5 PROTECTION OF PROPERTY

- A. Unless otherwise noted, the Contractor is responsible for removal of trees within the construction easement as necessary for safe performance of the work, but only such trees as necessary shall be removed. Trees which are damaged or later die as a result of the work shall be removed. Protect from damage and preserve trees, shrubs, and other plants outside the limits of the Work.
 - 1. Do not stockpile materials or permit traffic within drip lines of trees.
 - 2. Maintain temporary barricades around trees.
 - 3. No trees outside the construction easement shall be removed without written approval of the property owner and the Engineer.
 - 4. In the event of damage to bark, trunks, limbs, or roots of plants that are not designated for removal, treat damage by corrective pruning, bark tracing, application of a heavy coating of tree paint, and other accepted horticultural and tree surgery practices.
- B. In the case of shrubs and ornamental trees smaller than 3 inches diameter, the Contractor is responsible for either: (a) protecting these from damage, or (b) temporarily removing and then re-setting them without damage, or (c) replacing them with new stock of equal quality.
- C. In general, grass will be seeded over all areas as specified elsewhere herein and all areas will be left in a neat condition, free of debris.
- D. All property such as mailboxes, fences, signs, curb, paving, drain pipes, etc. shall be restored to original condition. Payment will be made only for those items that are listed in the bid proposal.
- E. No property beyond the construction easement is to be altered, but if this does occur the Contractor will promptly remedy same at no cost to the Owner.
- F. Contractor is responsible for maintaining all existing property corner markers. Markers in the way of construction shall be referenced prior to construction to facilitate replacement. Any lost or damaged property markers and pins shall be replaced and the contractors expense.

1.6 PROTECTION OF PAVEMENT

- A. When working along paved streets or roads, the Contractor shall use rubber-tired or other equipment which will not damage the paving and when pavement is damaged through negligence or carelessness on the part of the Contractor during construction, it shall be replaced at no expense to the City, County, or State, as the case may be. Mats shall be used to support tracked equipment while in use or while sitting on pavement. In no case shall a tracked vehicle be "walked" along a paved road or street from one section of work to another.

1.7 EXISTING UTILITIES AND STRUCTURES

- A. Information regarding underground utilities on the drawings is not guaranteed as to accuracy or completeness. Prior to beginning work the Contractor shall request a field location through the Utilities Protection Center (811 or 1-800-282-7411) and any utility owners thought to have facilities in the area. The Contractor shall promptly compare these field-marked locations with the project plans and then notify the engineer of any anticipated problems or need for contract changes. It is the Contractor's responsibility to excavate for

the purpose of determining exact elevations or locations at utility crossings and other critical locations well in advance of the work under this contract.

- B. All existing pipes, drains, or other structures on, above, or below ground shall be carefully supported and protected from injury and if injured, they shall be restored in a satisfactory manner by and at the expense of the Contractor.

1.8 HIGHWAY AND RAILROAD CROSSINGS

- A. Where lines cross railroads and/or highways under the jurisdiction of the State highway department, the Owner will secure written permission from the controlling authority before any work can be done within the right-of-way. After the Owner notifies the Contractor that the permit or permits have been obtained, the Contractor shall coordinate his activities and construction procedure with the proper authority of the Railroad or Highway Department and shall conform with the requirements thereof. The Contractor will be required to furnish a release from the said controlling authority before final acceptance of the work. The Contractor will be responsible for all damage and injuries to persons and property inflicted or caused by said work.

1.9 FENCE REMOVED AND REPLACED (ALL TYPES AND SIZES)

- A. The Contractor shall take down fences on or crossing right-of-way for such periods of time only as are necessary to prosecute the work of clearing, grubbing, trenching, pipe laying and backfilling. Gaps made in fences shall be closed in a substantial manner at night and during any suspension of work, and upon completion of the pipe line, fences shall be restored to as good condition as before disturbed. No charges shall be made by the Contractor for any expense incurred in taking down or restoring fences, except where listed in the bid proposal.

1.10 REMOVING AND REPLACING PAVEMENT

- A. All pavement cuts on City or County roads shall be made by sawing prior to excavation to eliminate uneven and ragged edges. Removing and replacing pavement shall consist of removing the type of pavement and base encountered and replacing same to its original shape, appearance and riding quality, in accordance with the drawings.
- B. The trench shall be backfilled in layers not more than 6" thick and shall be thoroughly compacted with mechanical tamps. No base course shall be placed on loose earth or dusty material.
- C. Paving material and thickness shall be as shown on the drawings.

1.11 BACKFILL MATERIAL - GENERAL

- A. Backfill material shall consist of soil or soil-rock mixture, which is free from topsoil, organic matter, and other deleterious substances. Large boulders, thick rock or quartz layers, which are not broken down by compaction equipment, will not be suitable for use in the fill.
- B. Backfill material shall be subject to the approval of the Engineer.

1.12 SIDEWALK REPLACEMENT

- A. Sidewalk removed shall be replaced with sidewalks of the same width, similar finish and a minimum of 4" thickness. The Contractor shall remove only those sections of sidewalk that need to be removed to carry out the work. Adjoining sections of sidewalk shall be protected from damage during construction. Sidewalks to be removed shall be removed to the nearest expansion joint or sawed at the nearest control joint.

1.13 CURB AND GUTTER REMOVAL AND REPLACEMENT

- A. Curb and Gutter shall be removed only to the extent necessary to complete the work under this Project. Any curb and gutter that is removed shall be replaced. The replaced section shall match adjacent curb and gutter with respect to materials, finish, shape, slope and alignment.
- B. Before removal of any section, it shall first be cut to avoid damage to adjacent, remaining curb and gutter.

- C. After the concrete has set sufficiently, the space behind the curb shall be refilled to the required elevation with material which shall be compacted by tamping until firm and solid.

1.14 REPLACING GRAVEL DRIVEWAYS

- A. Gravel driveway stone shall be removed and replaced where required. Replacement materials shall resemble the original stone as close as practical. Gravel shall be placed 4" deep.

1.15 DUST CONTROL

- A. Contractor shall use all means necessary to control dust on and near the work and all off-site areas. As a minimum, Contractor shall moisten all surfaces as required to prevent excessive dust from escaping the work site and all off-site areas.

1.16 CLEAN-UP AND MAINTENANCE

- A. All surplus materials, tools, temporary structures, excess dirt, rubbish and debris shall be removed by the Contractor and the site of construction shall be left in a clean and neat condition, satisfactory to the Engineer.
- B. After the work is accepted as a whole, the Contractor shall maintain the surface of the unpaved streets, adjacent curbs, sidewalks, gutters, street paving, shrubbery, fences, sod, grass and other disturbed surfaces for a period of one hundred twenty days thereafter.
- C. All labor and material required for such maintenance and/or repairs shall be furnished at no cost to the Owner, and the work shall be done in a manner satisfactory to the Engineer.

** END OF SECTION **

SECTION 02125
EROSION AND SEDIMENTATION CONTROL FOR INFRASTRUCTURE PROJECTS

PART 1 – GENERAL

1.01 SCOPE

- A. The work specified in this Section consists of providing and maintaining temporary and permanent erosion and sedimentation controls as shown on the Drawings and as needed to comply with the Georgia Erosion and Sedimentation Control Act of 1975. It also includes performing all work required for compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit (No. GAR100002, Storm Water Discharges Associated With Construction Activity For Infrastructure Construction Projects), and with all other applicable regulations. Contractor's obligations under NPDES permitting shall include:
1. Contractor shall prepare a Notice of Intent (NOI), showing the Contractor as "Operator" and Primary Permittee. Contractor shall sign certifications required in section V of the NOI.
 2. Contractor shall install and maintain Best Management Practices (BMPs) necessary for compliance with regulations.
 3. Contractor shall conduct, utilizing qualified personnel as defined by the Permit, all inspections, monitoring, recording and reporting required by the Permit.
 4. Contractor shall prepare a Notice of Termination (NOT) to EPD as required by the Permit.
 5. Contractor shall be liable for any violations or enforcement actions by regulatory authorities in connection with the NPDES Permit for Stormwater Discharge.
- B. Any erosion control measures shown on the contract drawings constitute only a conceptual plan with minimum requirements. Additional Best Management Practices (BMPs), coordinated with the Contractor's specific construction operations and scheduling for this project, may be needed to meet the requirements of the NPDES Permit. Temporary and permanent erosion and sedimentation controls include grassing and mulching of disturbed areas and structural barriers for control of erosion and sedimentation within acceptable limits as established by the Georgia Erosion and Sedimentation Control Act of 1975, as amended, the Federal Clean Water Act, as amended, the Georgia Water Quality Control Act, as amended, and applicable codes, ordinances, rules, regulations and laws of local and municipal authorities having jurisdiction.
1. "Minimum BMP Requirements" for this project include:
 - a. Installation of Type B silt fence at those locations where runoff leaves the construction zone; that is, the downhill edge of construction limits. Note that in general the construction drawings do not show the specific locations for Type B fence since this a universal requirement for the project.
 - b. Installation of Type C silt fence at those locations such as ditch crossings, around drainage inlets and other areas where runoff flow and sediment storage requirements are expected to exceed the capacity of Type B silt fence. Note that in general these minimum locations for Type C silt fence are shown on the contract.

- c. Installation of Construction Exits at locations where construction equipment is expected to exit from the construction zone. Note that in general these minimum locations are shown on the contract.
- d. Installation of other BMPs that are shown on the contract drawings or listed herein under "Minimum BMP Requirements" for this project.

2. "Additional BMP Requirements" for this project include all other work, beyond the "Minimum BMP Requirements" listed above, that is required to comply with this section of the contract documents.

- C. Land disturbance permit shall be obtained by the Owner. Land disturbance activity shall not commence until the Land Disturbance Activity Permit has been issued.
- D. This work also includes the subsequent removal of temporary erosion and sedimentation controls.

1.02 SUBMITTALS

- A. Submit product data in accordance with the requirements of Section 01340 of these Specifications.
- B. Submit three copies of the Erosion, Sedimentation and Pollution Control Plan (ESPCP) and Notice of Intent (NOI) to the Engineer for the project records.
- C. Submit the Erosion, Sedimentation and Pollution Control Plan (ESPCP) and fully executed Notice of Intent (NOI) to the Georgia Environmental Protection Division (EPD) at least fourteen (14) prior to starting work at the project site.

1.03 QUALITY ASSURANCE

- A. Perform all work under this Section in accordance with all pertinent rules and regulations including, but not necessarily limited to, those stated in these Specifications. Where provisions of pertinent rules and regulations conflict with these Specifications, the more stringent provisions shall govern.
- B. Provide all materials and promptly take all actions necessary to achieve effective erosion and sedimentation control in accordance with the Georgia Erosion and Sedimentation Control Act of 1975, as amended (OCGA §12-7-1, et. seq.), the NPDES General Permit, local ordinances, other permits, local enforcing agency guidelines and these Specifications.
- C. Basic Principles
 - 1. Coordinate the land disturbance activities to fit the topography, soil types and construction operations.
 - 2. Minimize the disturbed area and the duration of exposure to erosive elements.
 - 3. Provide temporary or permanent stabilization to disturbed areas immediately after rough grading is complete.
 - 4. Safely convey run-off from the site to a stable outlet to prevent flooding and damage to downstream facilities resulting from increased runoff from the site.

5. Retain sediment on-site that was generated on-site.
6. Minimize encroachment upon watercourses.

D. Implementation

1. The Contractor is solely responsible for the control of erosion within the Project site and the prevention of sedimentation from leaving the Project site or entering waterways.
2. The Contractor shall install temporary and permanent erosion and sedimentation controls which will ensure that runoff from the disturbed area of the Project site shall pass through a filter system before exiting the Project site.
3. The Contractor shall provide temporary and permanent erosion and sedimentation control measures to prevent silt and sediment from entering the waterways.
4. The Contractor shall limit land disturbance activity to the minimum required to perform the work required by the project.
5. The Contractor shall maintain erosion and sedimentation control measures within disturbed areas on the entire site until final stabilization has been achieved on areas disturbed by construction. Maintenance shall include mulching, re-seeding, clean-out of sediment barriers and sediment ponds, replacement of washed-out or undermined rip rap and adding of erosion control material as necessary.
6. All erosion and sediment control measures shall be installed prior to initiation of construction activities or immediately after if location of control measures interferes with construction.
7. The Contractor shall designate one individual to be responsible for implementation and maintenance of erosion and sediment controls on a 24-hour, everyday basis and shall furnish the individual's name, address, and 24-hour telephone number to the Owner. This information shall be updated as necessary.

PART 2 – PRODUCTS

2.01 GENERAL

Standard vegetative and structural BMP measures shall comply with the Manual for Erosion and Sediment Control in Georgia. Products not listed that manual may be utilized on the project upon approval by the person who prepared the Erosion, Sedimentation and Pollution Control Plan (ESPCP) for the project.

2.02 SEDIMENT BARRIERS

A. STAKED HAYBALES - Sd1

1. Hay bale barriers are placed in a single row on natural ground where the most likely erodible areas are located to restrain sediment particles carried by sheet flow.

B. SILT FENCE - Sd1

1. Silt fences are temporary measures to retain suspended silt particles carried by sheet flow.

2. Silt fence consists of silt fabric, as specified in the Georgia Department of Transportation list #36, wood or steel posts, and wire or nail fasteners.
3. Type Sd-S silt fence is a woven 36-inch wide filter fabric with wire reinforcement. Sediment barriers being used as Type S for sensitive areas shall have a support spacing of no greater than 4 feet on center, with each driven into the ground 18 inches.

- C. Stone Check Dams: Stone shall conform to the requirements of Section 805.01 of the Georgia Department of Transportation Standard Specification, latest edition, for Stone Dumped Rip Rap except the stone shall be graded stone ranging from 2 to 10-inches in size.

2.03 CONSTRUCTION EXIT STONE

Aggregate size shall be in accordance with the National Stone Association Size R-2 (1.5 to 3.5-inch stone).

2.04 CONCRETE

Concrete shall have a compressive strength of not less than 3,000 psi and shall conform to the requirements for Class "B" concrete.

2.05 RIPRAP

Stone Rip Rap: Unless shown or specified otherwise, stone rip rap shall be Georgia DOT, Type 3.

2.06 FILTER FABRIC

- A. Filter fabric used for sediment control purposes shall be the non-woven type and shall conform to the Georgia Department of Transportation Standard Specifications, Section 881.06 for non-woven fabrics.
- B. Filter fabric shall be an approved product on the Georgia Department of Transportation Qualified Product List No. 28, latest edition.

2.07 VEGETATIVE PRACTICES

A. GENERAL

1. Disturbed areas shall be stabilized as construction progresses. For water mains installed within easements, the construction corridor shall not exceed 1,000 linear feet without stabilization. All other projects shall not exceed 300 linear feet without stabilization

B. DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) - Ds1

1. This practice is applicable where disturbed areas, temporarily idle, have not been established to final grade and/or where permanent vegetative cover is delayed for a period not to exceed 6 months.
2. Mulch materials shall consist of dry straw or hay, wood chips, erosion control matting or netting, or polyethylene film. The mulch should be uniform, spread over the designated area from 2 to 4 inches thick.

3. Any and all disturbed areas that have not yet reached final grade shall be stabilized with mulch or temporary grassing within fourteen (14) calendar days of disturbance.

C. DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING) - Ds2

1. Temporary seeding is a measure consisting of seeding and mulching to reduce erosion. All disturbed areas shall be seeded when and where necessary to reduce erosion.
2. This practice is applicable where disturbed areas, temporarily idle, have not been established to final grade and/or where permanent vegetative cover is delayed for up to 6 months.
3. Temporary seeding consists of a grass or grass-legume mixture suitable to the area and season of the year.

D. DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) - Ds3

1. See Section 02936 – Grassing

E. DISTURBED AREA STABILIZATION (WITH SODDING) - Ds4

1. See Section 02936 – Grassing

F. EROSION CONTROL MATTING AND BLANKETS - Mb

1. This practice is a protective covering (blanket) or soil stabilization mat used to stabilize disturbed areas until permanent vegetation on steep slopes, channels, or shorelines can be established.
2. Concentrated flow areas, all slopes steeper than 2.5:1 and with a height of ten feet or greater, and cuts and fills within stream buffers, shall be stabilized with the appropriate erosion control matting or blankets.
3. All blanket and matting materials shall be on the Georgia Department of Transportation Qualified Products List (QPL #62 for Blankets, QPL #49 for Matting).

PART 3 – EXECUTION

3.01 GENERAL

- A. All erosion and sediment control devices and structures shall be inspected by the Contractor after each rainfall event and maintained, repaired or supplemented as necessary to satisfy the contract requirements. Sediment ponds and barriers shall be cleaned out after buildup of sediment on a schedule that will prevent overflow of silt over the top of the barrier.
- B. After adequate permanent stabilization has been provided and accepted by the Engineer, all temporary erosion and sediment control structures and devices shall be removed.
- C. Basic Guidelines for Best Management Practices:
 1. Coordinate the land disturbance activities to fit the topography, soil types and site conditions.

2. Minimize the size of disturbed areas and the duration of exposure of non-vegetated areas. Refer to Section 02612, 3.02, for trench excavation.
3. Provide temporary or permanent stabilization to disturbed areas immediately after rough grading is complete.
4. Safely convey run-off from the site to a stable outlet to prevent flooding and damage to downstream facilities resulting from increased runoff from the site.
5. Retain sediment on-site as near as possible to the location where sediment originated.
6. Minimize encroachment upon watercourses and stream buffers.

3.02 SEDIMENT CONTROL

A. Construction Exit

1. Construction exit(s) shall be placed as shown on the Drawings, on the ESPCP, and as directed by the Engineer. A construction exit shall be located at any point traffic will be leaving a disturbed area to a public right-of-way, street, alley, sidewalk or parking area.
2. Placement of Construction Exit Material: The ground surface upon which the construction exit material is to be placed shall be prepared to a smooth condition free from obstructions, depressions or debris. The filter fabric shall be placed to provide a minimum number of overlaps and a minimum width of one foot of overlap at each joint. The stone shall be placed with its top elevation conforming to the surrounding roadway elevations. The stone shall be dropped no more than three feet during construction, and shall be GA DOT Standard Specification 800, Designation #57.
3. Construction Exit Maintenance: The Contractor shall regularly maintain the exit with the top dressing of stone to prevent tracking or flow of soil onto public rights-of-way and paved surfaces as directed by the Engineer.
4. Construction Exit Removal: Construction exit(s) shall be removed and properly disposed of when the disturbed area has been properly stabilized, the tracking or flow of soil onto public rights-of-way or paved surfaces has ceased and as directed by the Engineer.

B. Sediment Barriers

1. Sediment barriers shall include, but are not necessarily limited to, any device that prevents sediment from leaving the disturbed area and shall be installed as shown on the Drawings and as directed by the Engineer.
2. Sediment barriers shall be maintained to ensure the depth of impounded sediment is no more than one-half of the original height of the barrier or as directed by the Engineer. Torn, damaged, destroyed or washed-out barriers shall be repaired, reinforced or replaced with new material and installed as shown on the Drawings and as directed by the Engineer.
3. Silt fences, hay bales and rock check dams shall not be used in any flowing stream, creek or river.

4. Rip rap shall be placed as shown on the Drawings and as directed by the Engineer. Filter fabric shall be placed under all rip rap unless shown or specified otherwise; except that, filter fabric shall not be placed under rip rap on stream or drainage ditch crossings.

C. Temporary Grassing

1. Temporary grassing shall be used on any area within the construction limits that is not scheduled for a permanent stand of grass or mulch cover.
2. In those locations where Temporary Grassing is utilized, the grassing operation shall follow promptly behind the clearing operation as soon as the work allows.

D. Mulch Stabilization

1. Straw mulch stabilization or wood chips shall be used on any area within the construction limits that is not scheduled for a permanent or temporary stand of grass. Straw mulch shall be applied uniformly by hand or mechanical means to a depth of 6" (approximately 2 1/2 tons of dry straw per acre). To prevent displacement by wind and water after application, the straw mulch shall be pressed into the soil with a tracked vehicle or disk harrow.
2. Wood chip mulch stabilization may be used in any area when directed by the Engineer except any area where a permanent stand of grass is to be installed. Wood chips shall be spread uniformly to a depth of at least 3 inches.

E. Erosion Control Blankets

1. Erosion control blankets of an approved type shall be placed on slopes steeper than 3 horizontal to 1 vertical, on the bottom of ditches and others areas where necessary to limit erosion and facilitate the establishment of grass.

END OF SECTION

SECTION 02355
STEEL H-SECTION PILES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. CONTRACTOR shall provide all labor, materials, equipment and incidentals as shown, specified and required to furnish and install steel H-Section piling. Included are furnishing, driving, cutting-off, and all other Work for piling.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Codes: Comply with applicable requirements of the codes referenced in Section 01080 REFERENCE STANDARDS.
- B. ASTM A36, Standard Specification for Carbon Structural Steel.
- C. ASTM A572, Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
- D. ASTM A588, Standard Specification for High-Strength Low-Alloy Structural Steel with 50 ksi Minimum Yield Point to 4-inches Thick.
- E. ASTM A690, Standard Specification for High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine Environments.
- F. ASTM D1143, Standard Test Method for Piles under Static Axial Compressive Load.
- G. ASTM D3689, Standard Test Method for Individual Piles Under Static Axial Tensile Load.
- H. ASTM D3966, Standard Test Method for Piles Under Lateral Loads.
- I. ASTM D4945, Standard Test Method for High-Strain Dynamic Testing of Piles.
- J. AWS D1.1, Structural Welding Code – Steel.
- K. SSPC-PS 10.01, Hot-Applied Coal Tar Enamel Painting System.
- L. SSPC-PS 11.01, Black (or Dark Red) Coal Tar Epoxy Polyamide Painting System.
- M. SSPC-SP6, Commercial Blast Cleaning.

1.03 SUBMITTALS

- A. Submit Working Drawings as specified in Section 01300 SUBMITTALS. The data submitted shall include the following:
 - 1. Submit working drawings in advance of the start of pile driving showing the location of all piles. Assign an identification number for each pile coinciding with the identification

number used in the driving record of each pile. These drawings shall include the driving sequence anticipated for the Work.

2. Full data on type of pile proposed and on hammer and other equipment to be utilized.
3. The proposed pile installation procedures.
4. Details of pile splices.
5. Details of welded assembly for connection to structure.
6. Qualifications of personnel performing welding.
7. Qualifications of personnel supervising the performance of pile installation meeting the requirements as described herein

B. Driving Records:

1. Submit two copies of the driving record of each pile to OWNER not later than two days after driving. Include the Project name and number, name of CONTRACTOR, pile location and number, computed pile capacity, type and size of hammer used, type of pile driving cap used, rate of operation of pile driving equipment, pile dimensions, elevation of point, elevation of butt before and after cut-off, ground elevation, continuous record of number of blows for each foot of penetration, pile deviation, pile uplift and reaction, and any unusual occurrences during pile driving.
2. Submit Record Drawings showing exact location of each pile as driven.

C. During progress of the Work, keep an up to date set of Drawings showing field modifications. Immediately upon completion of work, provide Record Drawings showing the actual in-place installation of all Work constructed and/or installed under this Section. Drawings shall include all necessary plans, sections and details, with all reference dimensions and elevations required for complete Record Drawings of the Work.

1.04 QUALITY ASSURANCE

A. CONTRACTOR Qualifications shall meet the requirements of the following.

1. Pile Driver (Installer) Qualifications: An experienced pile driver, with a minimum of 5 years documented experience, to assume engineering responsibility and perform work of this Section. The pile driver shall have specialized experience in installing piles similar to those required for this Project on a minimum of three previous projects and with a record of successful in-service performance.

B. Comply with all rules, regulations, laws and ordinances of the State of Florida, OSHA and of all other authorities having jurisdiction. All labor, materials, equipment and

services necessary to make the work comply with such requirements shall be provided by the CONTRACTOR without additional cost to the OWNER.

1.05 JOB CONDITIONS

A. Product Delivery, Storage and Handling:

1. CONTRACTOR shall deliver, store, handle and protect all products, materials and equipment.
2. Deliver materials to the site in such quantities and at such times as to assure the continuity of pile installation operations for each pile.
3. Store piles in orderly groups above ground and blocked during storage to minimize possible distortion.
4. Lifting points shall be clearly marked on the piles by the manufacturer, and all handling and storage shall be undertaken with consideration for required support.
5. Piles shall be picked up into the leads by the designated lifting points.
6. Piles shall be clearly marked with the length of the pile prior to delivery.

B. Site Information:

1. The Contractor shall visit the site and become thoroughly familiar with all site conditions affecting the work and review the location of all piles for potential obstruction or interference during pre-drilling and driving.
2. Test borings and other exploratory operations may be made by the CONTRACTOR at no additional cost to the OWNER, provided such operations are acceptable to the OWNER, in accordance with Contract Documents.

C. Line and Level:

1. Benchmarks and elevations are shown on the Contract Drawings for the use of the CONTRACTOR in establishing lines and levels for the work. The CONTRACTOR shall establish and locate all other lines and levels and be responsible for the correct location and deviation measurements of all piles.
2. All piles shall be installed at the proper locations and orientations as shown on the plans. Pile locations shall be checked during installation and appropriate measures taken, as necessary, to maintain the correct pile location and orientation.
3. The CONTRACTOR shall cooperate with the OWNER and provide them safe access to the pile installation locations in order to perform their work.

D. Protection:

1. The CONTRACTOR shall protect adjacent property, public utilities and structures, and completed work, from damage associated with the pile driving operation. Damage due to pile driving as a result of CONTRACTOR'S work shall be repaired by the CONTRACTOR at no additional cost to the OWNER.

E. Cost of Redesign:

1. Piling driven incorrectly, out of position, or which is defective in any way shall be corrected as directed by OWNER and as described hereinafter.
2. OWNER will record all time required by it and the OWNER'S consultants, if any, in redesigning piling, foundations or other related structural work and in making revisions to the Contract Documents as a result of improperly installed piles.
3. CONTRACTOR shall reimburse OWNER for the additional services of the OWNER and their consultants based on a charge of 2.5 times salary costs.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Steel:

1. Provide hot-rolled carbon steel structural shapes and plates, complying with ASTM A588 or ASTM A572, Grade 50, unless otherwise shown or specified. Piles shall be epoxy coated with color chosen by Owner.
2. Provide carbon steel angles and plates complying with ASTM A36, unless otherwise shown or specified.
3. Cut to mill tolerances on piles that are to be spliced.
4. The H-pile steel shall be of sufficient strength and rigidity to withstand all driving and handling stresses and to maintain initial shape within the tolerances specified hereinafter. Pile materials shall be new and of uniform quality.
5. Piles shall be coated according to the following requirements:
 - a. Surface Preparation – Prepare the substrate by providing a depth of anchor profile in accordance with the manufacturer's product data sheet, but in no case less than 2.5 mils. Re-blast piles not coated during the same shift or if the surface to be coated no longer meets the requirements SSPC-SP 10.
 - b. Unless otherwise shown in the Drawings, apply the inorganic zinc primer to all surfaces of piles. Unless otherwise shown in the Drawings, apply coal tar-epoxy coatings to the exposed sides of piles from the top of the piles to a depth of five feet below the lower of the design ground surface or the design scour depth. Apply the coal tar-epoxy in accordance with the following specific requirements:

- i. Apply the coal tar-epoxy system in two coats. The time interval between the first coat and the second coat will be in strict accordance with the coating manufacturer's published specifications. Apply the first coat to yield a dry film thickness of 8 to 10 mils. Apply the second coat to attain a total dry film thickness of the two coats between 16 and 20 mils.
- ii. Ensure that no portion of the coating is less than the specified minimum film thicknesses. The total minimum film thickness for any combination of coats will be the sum total of the averages of the specified thickness range of the individual coats.
- iii. After applying the coating on the steel piles, the Engineer will thoroughly inspect the surfaces and make film thickness measurements at the approximate rate of one for each 25 square feet of area unless deficient thickness is found. In this case, the rate of sub-measurements will be increased as required to determine the extent of the deficient area.

2.02 FABRICATION

A. Pile tips:

1. Pile tips as driven shall be square and blunt unless shown otherwise on the Contract Drawings. Manufactured pile tips shall not be used for the piles.

2.03 DRIVING EQUIPMENT

A. General:

1. Piles shall be driven with a single-acting steam or diesel hammer of a type approved by OWNER. CONTRACTOR shall select a hammer with sufficient energy to drive the piling to the required tip elevation without causing damage to the pile. The valve mechanism of single-acting hammers shall be maintained in first-class condition so that the length of the stroke is maintained. If diesel hammers are used, they shall be equipped with chambers and gages arranged so that precise energy information can be read and recorded. CONTRACTOR shall provide all material relative to construction and performance of the hammer as OWNER may request. Hammer shall be in good operating condition at all times during driving.
 - a. Unless otherwise indicated on the Contract Drawings or approved by OWNER, the hammer shall have a rated driving energy of 66,000 foot-pounds per blow for HP10 x 42 piles and as determined by wave equation analyses.

- ### B. Driving Caps:
- Equip hammer with cushioned or blocked driving cap, conforming to the pile shape. The cushion shall be consistent with wave equation analyses and dynamic testing. The cushion or block shall be replaced when burned or otherwise worn. Keep bearing surfaces of driving cap true and smooth.

- C. Leads: Use fixed or rigid type pile driver leads that will hold the pile firmly in position and alignment and in axial alignment with the hammer. Free-swinging leads will not be permitted. Extend leads to within 2 feet of the elevation at which the pile enters the ground.

PART 3 - EXECUTION

3.01 INSPECTION

- A. CONTRACTOR shall examine the areas and conditions under which steel H-Section piles are to be installed. Notify OWNER, in writing, of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the OWNER.

3.02 PRE-DRIVING WORK

A. Site Conditions:

1. Do not drive piles until the earthwork in the area which piles are to occupy has been completed, as follows:
 - a. Excavations: Stop earth excavation at an elevation of 6-inches to 12-inches above the bottom of the footing before piles are driven. Final excavation to the required elevation of footing bottoms shall be done after the piles have been installed and tested.
 - b. Fills: Construct and compact fills to the elevation of the grade shown.
2. Do not drive pile within 15 feet of any concrete or masonry structure which has not attained its full design strength.
3. When piles are located in an area where pre-drilling is to occur, the piles shall not be driven until the pre-drilling has been completed.

B. Pile Length Markings:

1. Mark length of pile by painting the number of feet from the pile point at 5-foot intervals and painting a horizontal line, at 12-inch intervals, starting 30 feet below pile cut-off.

C. Welding:

1. All shop and field welding shall be performed by certificated welders under the immediate supervision of a representative of an approved standard testing agency or an inspection agency. The costs of all welding inspections shall be borne by the CONTRACTOR.

D. Splices:

1. Splices should be minimized. Where necessary, two splices shall be permitted per length of pile, unless indicated otherwise on the Contract Drawings.

2. Clean surfaces to be welded of all rust, scale, oil, paint, and foreign material. Use only pile members with identical cross-sections for splicing.
3. Make splices before starting driving operations, wherever possible. If a welded splice is required during the driving operation, make the splice when the top of the driven pile portion is at least 3 feet above the ground, to permit inspection of the welded connection during welding and during subsequent driving. The sections of piles to be spliced shall be secured in alignment such that there is no eccentricity between the axes of the two spliced lengths, or angle between them, after the splice has been completed. Splices performed during driving shall be completed during a stoppage of pile driving not to exceed 60 minutes or as necessary to prevent soil freezing around the pile.
4. Splices shall be 100 percent full penetration butt welded, producing a straight pile alignment through the splice and developing the full strength of the pile in both bearing and bending. Length of pile to be spliced shall be secured in proper alignment so that no eccentricity results.
5. All welding shall be performed in accordance with the applicable provisions of AWS D1.1 and Section 15018 WELDING. Ultrasonic testing of welds at pile splices shall be performed by an independent testing agency approved and paid by the CONTRACTOR. Testing shall be in conformance with ASTM E164-03. The CONTRACTOR shall cooperate with the testing agency to facilitate inspection. Welds which do not conform to applicable specifications shall be repaired at no additional cost as directed by the OWNER.
6. No splices will be permitted within 60 feet of the pile tip.
7. Welded spliced piles shall not be driven until the weld has been accepted by the OWNER'S representative. Welds that do not conform to specifications shall be gouged and repaired as directed by the OWNER'S representative.

3.03 DRIVING PILES

A. General:

1. The driving shall be performed in an orderly sequence progressing in one direction across each foundation element. No piles shall be installed in an area surrounded by previously driven piles. Piles shall only be driven in the presence of the OWNER or its representative.
2. The CONTRACTOR shall provide the necessary pile driving equipment for full-time operation at the site during the work to complete the work on schedule. The work shall require the mobilization of crane-mounted equipment for installation of the piles. The CONTRACTOR shall provide at least one fully equipped pile-driving rig in full-time

operation at the site during the work, and shall mobilize additional equipment, if necessary, to complete the work on schedule.

3. Confirm the following driving criteria by the test piles at each structure. Drive piles to or into the dense sand of the Potomac Group P2 stratum to an average penetration resistance of ten blows per inch for the final 6 inches for HP14 piles and eight blows per inch for the final 6 inches for HP12 piles. If an abrupt increase in driving resistance is encountered, terminate driving when pile penetration is less than 1/2-inch in ten successive blows. Continuously drive each pile at the locations indicated, to the required point elevation and driving resistance established by the driving and loading of test piles.
4. When the determination of the final driving resistance is being made, the steam, diesel, air, or hydraulic hammer shall be operated at a speed not less than 95 percent of the maximum blows per minute for which the hammer is rated by the manufacturer. The CONTRACTOR shall maintain the boiler or air pressure recommended by the manufacturer and shall employ the proper size hose and connections. When the determination of final driving resistance is being made with a diesel hammer, the energy being delivered to the pile shall be determined as the product of the weight of the ram times the observed or equivalent stroke for open diesel hammers; for closed diesel hammers, the energy shall be that indicated by an output gauge calibrated to measure total hammer energy.
5. Carefully maintain the center of gravity for each group or cluster of piles to conform to the locations shown.
6. Hammer and piles shall be supported in rigid leads designed to hold the pile firmly in position and in alignment with the hammer. Carefully plumb the leads and the pile before driving. Take care during driving to prevent and to correct any tendency of piles to twist or rotate.
7. When handling and driving long piles, take special precautions to ensure against overstress or leading away from a true position when driving.
8. As soon as driving of all piles is completed, excavate to final elevation around the piles, cut to required cutoff elevation, install welded attachments, and place the concrete working mat around the piles as indicated on the Contract Drawings.

B. Driving Tolerances:

1. Drive piles within the following maximum tolerances:
 - a. Location: 3 inches from the location indicated for the center of gravity of each single pile or 1.5 inches for the centroid of pile groups.
 - b. Plumbness: Piles shall not be out of plumb more than 2.5 percent of their length when installed. Maintain 1 inch in 10 feet from the vertical, or a maximum of 4 inches, measured when the pile is above ground, in the leads.

C. Corrective Action:

1. OWNER may survey the piles at any time. If any heave or any other discrepancy is detected, CONTRACTOR shall redrive or replace the pile or piles, at no additional cost to the OWNER.
2. Immediately after a pile group is installed, the CONTRACTOR'S Licensed Surveyor shall establish a reference point and its elevation on each pile for the purpose of checking uplift of the pile top as additional piles are installed. If uplift of 0.04 feet or more occurs as a result of pile installation at other locations, the pile shall be redriven to its original elevation, and deeper if necessary, to the approved final driving resistance.
3. The radius of uplift shall be initially assumed to be 35 ft. This radius may be expanded or contracted by the OWNER'S representative based on actual field measurements and is defined as the maximum distance between piles such that pile driving causes uplift of 0.04 feet or more in the affected pile.
4. OWNER will check the piling and determine its acceptability. If not acceptable, OWNER will advise CONTRACTOR what additional piles must be furnished and driven or other corrective measures to be taken.
5. OWNER will provide redesign, as required, because of piles driven out of location. All corrective measures, including cost of OWNER'S redesign, shall be at CONTRACTOR'S expense.
6. Partial surveys of piles at cutoff elevation can be submitted to the OWNER for review, as driving proceeds, in order to expedite the Work.

D. Related Activities:

1. Jetting, spudding, and predrilling (at locations not indicated on Contract Drawings) of piles shall not be employed, except with the written consent of OWNER.

E. Damaged or Misdriven Piles:

1. Damaged piles, and piles driven outside the required driving tolerances, will not be accepted.
2. Withdraw piles rejected after driving and replace with new piles.
 - a. Solidly fill spaces that are left by withdrawn piles, which will not be filled by new piles, using cohesionless soil material such as gravel, broken stone, and gravel-sand mixtures. Place and compact throughout the length of the space.
3. If abandonment of piles is required because of damage, mislocation, misalignment or obstructions encountered, or failure to meet the driving criteria, CONTRACTOR shall install replacement piles as required, at no additional cost to the OWNER.

4. Drive additional piles where the centerline deviation exceeds 3 inches and a redesign indicates a load on any pile exceeding 110 percent of the design load. Where these additional piles necessitate changes in pile cap dimensions or reinforcement, CONTRACTOR shall carry out all corrective measures required to obtain the approval of OWNER, at no additional cost to the OWNER. Should it be impractical to drive additional piles in particular situations, provide reinforced concrete straps or other measures, as directed by OWNER, for redistributing the design loading, at no additional cost to the OWNER.
 5. Piles which are bent, crimped, buckled, or otherwise unsatisfactory as hereinafter specified, and which cannot be removed or repaired, shall be abandoned.
 6. Piles indicating sudden or peculiar decrease in penetration resistance during driving will be assumed to be broken and will be rejected unless OWNER'S representative review of available data indicates that sudden decrease in driving resistance is due to natural, subsurface conditions and continued acceptable driving behavior is observed.
- F. Cutting Off:
1. Cut-off the tops of driven piles, square with pile axis and at the elevations indicated with a cutting torch or other acceptable method.
 2. Piles driven below the required cutoff elevation will not be acceptable and shall be replaced, at no additional cost to the OWNER.
- G. Top Plates:
1. After pile is cutoff, where indicated on the Contract Drawings, weld top plates in place, square and level on top of pile. Air holes may be drilled, punched or burned to prevent air pockets under the plate during concrete placement, if acceptable to OWNER.
- H. Pile Design Load Capacities: The design load capacities per pile shall be as shown on the Drawings.

END OF SECTION

SECTION 02936
GRASSING

1 GENERAL

1.1 SCOPE

- A. This section covers preparation of subsoil, placing of topsoil, grassing construction, protection, maintenance, guarantee and replacement of grassing, and related items necessary for the establishment of a suitable stand of grass in areas disturbed by the construction.

1.2 SUBMITTALS

- A. Certification of Grass Seed: Submit seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for each grass seed species.

1.3 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.4 MAINTENANCE

- A. Provide service and maintenance of seeded areas until final completion and closeout of the project.
- B. Maintenance includes re-fertilization, weeding, mowing, watering, clean up, repair of all washouts, and gullies.

1.5 ACCEPTANCE

- A. Establish a uniform stand of the specified grass with scattered bare spots, none of which is larger than one square foot, allowed up to a maximum of 3% of any grassed area.
- B. It shall be the responsibility of the Contractor to repair any erosion damage to the grassed area until the date of final acceptance.

2 PRODUCTS

2.1 MATERIAL STANDARDS

- A. Use materials that meet the requirements of the following Georgia Department of Transportation Standard Specifications:
 - 1. Wood Fiber Mulch DOT Sec. 718.2
 - 2. Emulsified Asphalt DOT Sec. 822
 - 3. Agricultural Lime DOT Sec. 882.2.01
 - 4. Seed DOT Sec. 890.2.01
 - 5. Sod DOT Sec. 890.2.02
 - 6. Fertilizer DOT Sec. 891.2.01
 - 7. Plant Topsoil DOT Sec. 893.2.01
 - 8. Mulch DOT Sec. 893.2.02
 - 9. Inoculants DOT Sec. 893.2.04
 - 10. Tackifiers DOT QPL 33

2.2 SEED MIXTURE

- A. The seed mixture will be selected based on the geographic zone, the time of planting and the desired species of permanent grassing. This project is located in DOT Zone 2. Whenever seeds are specified by their common names, use the strains indicated by their botanical names. Use inoculants as required based on the type of seed. See Section 700 of Georgia DOT Standard Specifications for required seed mixture and planting times to achieve the permanent types of grass for each area of the project listed below.
- B. Permanent grassing species to be Common Bermuda. A permanent stand of grass is required on all exposed slopes and areas adjacent to the approach road and turn-around. Areas below water level and areas around the edge of the river and reservoir do not require permanent grassing.
- C. Temporary Grassing may be required if planting is needed at a time when the desired permanent grassing cannot be seeded according to Section 700 of Georgia DOT Standard Specifications. Any temporary grassing must be approved by Engineer.
- D. When grassing right-of-way adjacent to existing lawns, use the same type of grass as is present on the lawn.

2.3 SOIL MATERIALS

- A. Conserve and stockpile the best topsoil from the site for use on grassed areas. If necessary to achieve the specified stand of grass, Contractor shall haul in topsoil from offsite.

2.4 ACCESSORIES

- A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry.
- B. Fertilizer: Use a balanced commercial fertilizer mixed grade such as 10-10-10, 6-12-12, 5-10-15, or other analysis and apply at the rate per acre needed based on soil test results.
- C. Water: Clean, fresh and free of substances or matter that could inhibit vigorous growth of grass.
- D. Erosion Fabric: Where required to contain erosion, install a biodegradable matting
- E. Lime: Use agricultural lime.

2.5 TESTS

- A. Soil samples shall be taken and tested to determine grade and rate of application rates of fertilizer and lime.

3 EXECUTION

3.1 EQUIPMENT

- A. Use grassing equipment able to produce the required results.

3.2 PREPARATION OF SOIL

- A. Prepare the ground by plowing under any temporary grass areas and preparing the soil as follows:
 - 1. Slopes 3:1 or Flatter:
 - a. Plow shoulders and embankment slopes to between 4 in and 6 in deep. In cut areas, plow to no less than 6 in deep. After plowing, thoroughly disk the area until pulverized to the plowed depth.
 - 2. Slopes Steeper Than 3:1
 - a. Prepare the ground to develop an adequate seed bed using any of the following methods: Plow to whatever depth is practicable. Use a spiked chain. Walk with a cleated track dozer. Scarify.

- B. Remove boulders, stumps, large roots, large clods, and other objects that interfere with grassing or mowing.
- C. Spread topsoil stockpiled during grading evenly over cut and fill slopes after preparing the ground and just before seeding is scheduled.
 - 1. Slopes on the dam shall have topsoil to a minimum depth of 4 inches.
 - 2. If sufficient topsoil is available, it shall be spread over areas of the roadway that are to receive grass. Take care to notch out shoulders or leave below grade so that topsoil does not cause ponding against the edge of the travel surface.

3.3 FERTILIZER AND LIME

- A. Apply fertilizer and lime at the recommended rate per acre in accordance with soil test results. Mix thoroughly in the top several inches of soil using harrows, tillers or other suitable equipment.

3.4 SEEDING

A. Inoculate Seed.

- 1. Inoculate each kind of leguminous seed separately with the appropriate commercial culture according to the manufacturer's instructions for the culture. When hydroseeding, double the inoculation rate. Protect inoculated seed from the sun and plant it the same day it is inoculated.

B. Sowing

- 1. Weather permitting, sow seed within 24 hours after preparing the seed bed and applying the fertilizer and lime.
- 2. Sow seed uniformly at the rates specified in the GA DOT Seeding Table for the specified type of permanent stand of grass.
- 3. Use approved mechanical seed drills, rotary hand seeders, hydraulic equipment, or other equipment to uniformly apply the seed. Do not distribute by hand.
- 4. To distribute the seeds evenly sow seed types separately, except for similarly sized and weighted seeds.

C. Rolling

- 1. Roll seeded areas before applying mulch, except on steep slopes where rollers cannot operate satisfactorily. On slopes inaccessible to compaction equipment, cover the seeds by dragging spiked chains over them or by using other methods.
- 2. Do not sow during windy weather, when the prepared surface is crusted, or when the ground is frozen, wet, or otherwise non-tillable.

D. Hydroseeding

- 1. Hydroseeding may be used on any grassing area. Under this method, spread the seed, fertilizer, and wood fiber mulch in the form of slurry. Seeds of all sizes may be mixed together. Inoculate the seeds at double the rate for seeds not being hydroseeded. Apply hydroseeding as follows:
 - a. Use wood fiber mulch as a metering agent and seed bed regardless of which mulching method is chosen.
 - b. Apply wood fiber mulch at approximately 1,500 lbs/acre.
 - c. Prepare the ground for hydroseeding as for conventional seeding.
 - d. Use specially designed equipment to mix and apply the slurry uniformly over the entire seeding area.
 - e. Agitate the slurry mixture during application.
 - f. Discharge slurry within one hour after being combined in the hydroseeder. Do not hydroseed when winds prevent an even application.

- g. Closely follow the equipment manufacturer's directions.
- h. Mulch the entire hydroseeded area.

3.5 MULCHING

- A. Evenly apply straw or hay mulch between 3/4 in and 1-1/2 in deep, according to the texture and moisture content of the mulch material.
- B. Mulch shall allow sunlight to penetrate and air to circulate as well as shade the ground, reduce erosion, and conserve soil moisture. If the type of mulch is not specified on the Plans or in the Proposal, use any of the following as specified.
 - 1. Mulch with Binder. Apply mulch with binder regardless of whether using sowing or hydroseeding methods for seeding. Apply manually or with special blower equipment designed for the purpose. When using a blower, thoroughly loosen baled material before feeding it into the machine so that it is uniformly coated with binder and broken up. After distributing the mulch initially, redistribute it to bare or inadequately covered areas in clumps dense enough to prevent new grass from emerging. Do not apply mulch on windy days. Apply enough binder to the mulch to hold it in place. Immediately replace mulch that blows away. When using a power blower to distribute the mulch, spray the binder onto the mulch as the mulch is ejected from the machine. If distributing the mulch by hand, immediately apply the binder uniformly over the mulched areas. Use one of the following binders: Emulsified asphalt, SS-1h or SS-1 (DOT Section 822); or use a tackifier listed in the Laboratory Qualified Products Manual. Follow manufacturer's recommended rates.
 - 2. Mixed-in-Place Mulch. Apply mixed-in-place mulch on flat areas or slopes 3:1 or less and treat as follows:
 - a. Immediately work the mulch into the soil with appropriate equipment to produce a loose soil and mulch mixture 3 in to 3.5 in (75 mm to 90 mm) deep.
 - b. After mixing mulch and soil and restoring areas to line and grade, seed as specified in this Section.
 - 3. Walked-in-Mulch
 - a. Apply walked-in-mulch on slopes ranging in steepness from 5:1 to 2:1 and treat as follows:
 - b. Immediately walk it into the soil with a cleated track dozer. Make dozer passes vertically up and down the slope.
 - c. Where walked-in-mulch is used, do not roll or cover the seeds.
- C. Cover seeded slopes where grade is 2:1 or greater with an approved erosion fabric installed according to manufacturer's recommendations.

3.6 MAINTENANCE

- A. After the grass has grown to a height of 2 inches and before final acceptance, one additional application of nitrogen at the rate of 50 lbs/acre must be applied.
- B. Apply nitrogen with mechanical hand spreaders or other approved spreaders capable of uniformly covering the grassed areas. Do not apply nitrogen on windy days or when the foliage is damp. Do not apply nitrogen between October 15 and March 15 except in Zone 4. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at anyone mowing.
- C. Water to prevent grass and soil from drying out.
- D. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
- E. Immediately reseed areas that show bare spots.
- F. Apply fertilizer at approximately 600 lbs/acre each spring after initial plant establishment until Final Acceptance.

- G. The Engineer may require replanting of an area that shows unsatisfactory growth for any reason at any time. Except as otherwise specified or permitted, prepare replanting areas according to the Specifications as if they were the initial planting areas. Grassed areas will be considered acceptable when a viable stand of grass covers at least 98% of the total area with no bare spots exceeding one square foot and the ground surface is fully stabilized against erosion.

** END OF SECTION **