

**PROJECT MANUAL**

**FOR**

**HAGLEY WEST DRAINAGE  
IMPROVEMENTS PHASE 2**

**DRAINAGE IMPROVEMENT PROJECT**

**BID NO.18-043**

**GEORGETOWN COUNTY,  
SOUTH CAROLINA**

**VOLUME I**  
**DIVISION 0 – BIDDING AND CONTRACT DOCUMENTS**  
**DIVISION 1 – GENERAL REQUIREMENTS**  
**DIVISION 2 TECHNICAL SPECIFICATIONS**

**PREPARED BY:**  
**GEORGETOWN COUNTY**  
**DEPARTMENT OF PUBLIC SERVICES**  
**CAPITAL PROJECTS DIVISION**

**June 8, 2018**

**VOL. I PROJECT MANUAL**

**DATE: 06/08/2018**

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**SECTION 00010**

**REQUEST FOR PROPOSALS**

**Bid Time Line: # 18-043**

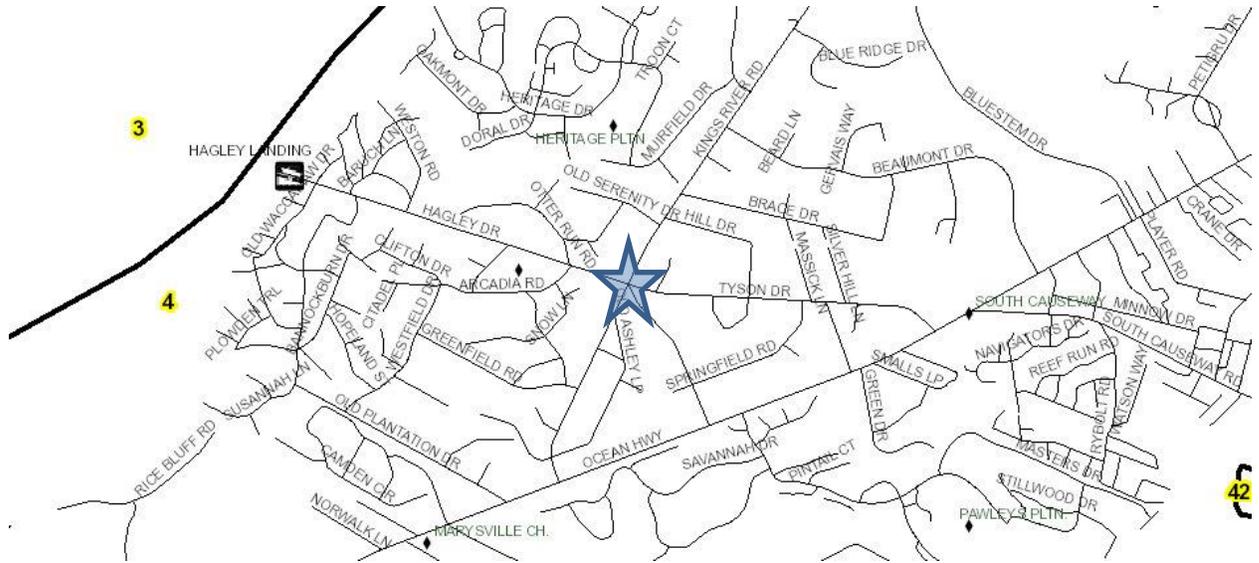
<b>Item</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>
<b>Advertised Date of Issue:</b>	Friday, June 8, 2018	n/a	n/a
<b>MANDATORY Site Inspection:</b>	Wednesday, June 20, 2018	2:00PM ET	On Site *
<b>Inquiry Cut-Off Time:</b>	Wednesday, July 3, 2018	3:00PM ET	Suite 239
<b>Bid Delivery Cut-Off Time:</b>	Wednesday, July 11, 2018	3:00PM ET	Suite 239
<b>Bid Opening and Tabulation:</b>	Wednesday, July 11, 2018	3:00PM ET	Suite 239
<b>County Council Review:</b>	Tuesday, July 24, 2018	5:30pm ET	Chambers 217
<b>Earliest Possible Notice to Proceed:</b>	Monday, August 8, 2018	n/a	n/a
<b>Substantial Completion:</b>	210 Calendar Days from NTP	n/a	n/a

† All locations in the Old County Courthouse, 129 Screven Street, Georgetown, SC unless otherwise stated.

\* We will meet at the “5 Points Intersection” in Hagley Estates. See Item # 2 below and as continued on page 5

**HAGLEY WEST DRAINAGE IMPROVEMENTS PHASE 2  
GEORGETOWN, SOUTH CAROLINA  
BID NUMBER 18-043**

- 1) Written, sealed proposals for the Hagley West Drainage Improvements Phase 2, Georgetown County, SC will be received by the Purchasing Office, 2<sup>nd</sup> floor, Suite 239, 129 Screven St., Georgetown, SC until cut-off time shown in the Bid Time Line above. Bids will then be publicly and promptly opened and read at the designated time by the Purchasing Officer. Bids that are not in the Purchasing Officer’s possession prior to the stated opening date and time will be considered NON-RESPONSIVE and returned unopened. An official authorized to bind the Bid must sign all bid documents submitted.
  
- 2) A **MANDATORY Pre-Bid Site Inspection** will be held in the community of Hagley Estates. We will meet at the “5-Points Intersection” created by the convergence of Hagley Drive, Tyson Drive, and Kings River Road in the Pawleys Island area on **Wednesday, June 20, 2018 at 10:00 AM** Eastern Time. An official site tour will be conducted. Each provider will be responsible to make their own independent inspection of the project area. Only those companies with a representative registered in attendance will be qualified to submit a Bid. There will be NO late attendance permitted. Please be courteous to property owners and residents and do not block driveways, or park on private grass or lawns.



- 3) The project site includes work areas adjacent to the Founders Club golf course and there are special conditions which will prevail and are to be emphasized during the pre-bid.
- 4) One (1) unbound reproducible ORIGINAL of the Bid must be submitted in a sealed envelope and clearly marked as follows:

BIDDER'S NAME  
 BID ITEM NAME  
 BID NUMBER

- 5) This project may consist of, but not be limited to: site preparation, excavation and grading, drainage, utilities, and erosion control. The work performed under this Contract shall include, but may not be limited to: the furnishing of all labor, materials, equipment and services, whether specifically mentioned or not, that is required to complete the Construction of the Work of the project. All requirements of the State of South Carolina and all pertinent administrative regulations shall apply to this project as if herein written out in full.
- 6) The outside or exterior of each proposal envelope or container of the proposal **MUST** be marked and properly identified as appropriate and as provided more specifically herein, Section 00100, Instructions to Bidders, Paragraph IV Preparation and Submission of Bids. Proposals or amendments to proposals received after the proposal deadline will be considered as "Late Proposals" and will not be considered for any cause whatsoever. The Respondent shall sign his / her proposal correctly. All offers shall be entered in ink or typewritten. Proposals may be rejected if any omissions, alteration of form, additions not called for, or any irregularities of any kind are shown. Proposal envelopes or containers with amendments or changes written on the exterior will not be considered or opened. Respondents and their authorized representatives are invited to be present at the proposal opening.
- 7) Important Offeror Notes:
  - a) Bid Number & Title must be shown on the OUTSIDE of the delivery package.
  - b) Federal Express does NOT guarantee delivery to Georgetown, SC before 4:30 PM Eastern Time on Next Day Service.

- c) UPS WILL guarantee delivery to Georgetown, SC before 10:30 AM Eastern Time on Next Day “Early AM” Service.
- 8) Inclement Weather/Closure of County Courthouse  
If the County Courthouse is closed for business at the time scheduled for bid opening, for whatever reason, sealed bids will be accepted and opened on the next scheduled business day, at the originally scheduled time.
- 9) SITE INSPECTION:
- a) The bidder is expected to have become familiar with and take into consideration, site conditions which may affect the work and to check all dimensions at the site.
  - b) Each bidder shall acquaint themselves thoroughly as to the character and nature of the work to be done. Each bidder furthermore shall make a careful examination of the site of the work and inform themselves fully as to the difficulties to be encountered in performance of the work, the facilities for delivering, storing and placing materials and equipment and other conditions relating to construction and labor.
  - c) The bidder shall examine the premises and the site and compare them with any applicable drawings and specifications. He/she shall familiarize themselves with the existing conditions such as obstructive area levels and any problems related to erecting the required systems.
  - d) No plea of ignorance of conditions that exist or may hereafter exist on the site of the work, or difficulties that may be encountered in the execution of the work, as a result of failure to make necessary investigations and examinations, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of the contract documents and to complete the work for the consideration set forth therein, or as a basis for any claim whatsoever.
  - e) Insofar as possible, the Contractor, in carrying out his/her work, must employ such methods or means as will not cause interruption of or interference with the work of any other Contractor, or County personnel at the site.
  - f) When boring data is provided by the Owner, the Bidder shall assume responsibility for any conclusions he/she may draw from such data. (S)he may employ his/her own consultants to analyze available information and shall be responsible for any conclusions drawn from that information. The cost of such employment shall be borne solely by the Bidder.
- 10) The Construction Contract will be awarded to the firm or team of firms submitting the lowest and most responsive and responsible proposal as determined by the County. Georgetown County reserves the right to reject any and all proposals for any reason at any time prior to execution of the Contract. It further reserves the right to waive any and all technicalities and formalities in the proposal process as well as accept in whole or in part such proposal or proposals where it deems

it advisable in protection of the best interests of the County and to hold all proposals for examination for a period not to exceed ninety (90) calendar days. The selected Contractor is encouraged to utilize, to the extent possible, local firms and trades from within Georgetown County.

- 11) **Performance Bond:** The successful offeror must provide a Performance Bond from a surety company qualified to do business under the laws of the State of South Carolina in the amount of 100 percent (100%) of the contract amount, within fifteen (15) days after receipt of written notice of formal award of the Contract. Pricing for such Performance Bond should be indicated separately on the Vendor Bid Submission Form.
- 12) **Bid Bond:** Each bid must be accompanied by a Bid Bond, or by a certified check payable to Georgetown County, SC, for an amount equal to five per-cent (5%) of the total base bid as a guarantee that if the bid is accepted, the required Contract will be executed within fifteen (15) days after receipt of written notice of formal award. Bids not including such a bid bond will not be considered. Bid Bonds will be returned to unsuccessful vendors after award of Bid.
- 13) **Payment and Material Bond:** The successful offeror must provide a Payment and Material Bond from a surety company qualified to do business under the laws of the State of South Carolina in the amount of 100 percent (100%) of the contract amount, within fifteen (15) days after receipt of written notice of formal award of Contract.
- 14) **Construction Contract Documents:** including Bidding and Contract Documents, General Requirements, Plans and Technical Specifications may be viewed and downloaded on line at [www.georgetowncountysc.org](http://www.georgetowncountysc.org), select "Purchasing" and then "Current Bids". There is no charge or fee to download construction plans or the Project Manual.
- 15) **Allowances:**  
The Bidder shall include in the Contract sum, an Allowance in the amount of fifteen thousand dollars (\$15,000) for field testing and laboratory services. The services covered by this allowance shall be supplied by such persons or entities as the Owner may direct. These services are not intended to relieve the contractor of his/her responsibility for testing and / or laboratory services required in the construction contract documents as part of his/her Quality Control (QC) activities.
- 16) **Engineer of Record:**  
The owner's engineer of record for this project will be Mr. John Prorock, P.E., Stantec Consulting Services Inc.; 4649 Centre Pointe Drive, Suite 200; North Charleston, SC 29418, Telephone: (843)740-7700. **NOTE: all questions and requests for clarification must be directed to the OWNER, as instructed in Item #1, Section 1100, Page 8.**
- 17) **Electronic Data Transfer Disclaimer Notice**  
Georgetown County is providing, by agreement with certain parties, materials stored electronically. The parties recognize that data, plans, specifications, reports, documents, or other information recorded on or transmitted as electronic media (including but not necessarily limited to "CAD documents") are subject to undetectable alteration, either intentional or unintentional, due to, among other causes, transmission, conversion, media degradation, software error, or human alteration. Accordingly, all such documents are provided to the parties for informational purposes only and not as an end product or as a record document. Any reliance thereon is deemed to be unreasonable and unenforceable. These files do not include a professional surveyor's/engineer's stamp and only drawings with such stamp are to be considered as true and final. Georgetown County is not responsible for edited or reproduced versions of this digital data. Each respondent must include EXHIBIT K as a Mandatory Bid Submittal Form.

END OF SECTION 00010



## SECTION 00100

### INSTRUCTIONS TO BIDDERS HAGLEY WEST DRAINAGE IMPROVEMENTS PHASE 2 Bid# 18-043

#### 1. Submission of Questions

Questions must be submitted in writing via electronic mail, facsimile or postal mail to the Issuing Officer no later than the "Deadline for Questions" cutoff identified in the Bid Timeline on Page four (4) in order to generate an official answer. All written questions will receive an official written response from the Georgetown County Purchasing Office (GCPO) and will become addenda to the solicitation.

GCPO reserves the right to reject or deny any requests made by the provider.

Impromptu, unwritten questions are permitted and verbal answers may be provided, but are only intended as general direction and will not represent the official GCPO position. The only official position of GCPO is that which is stated in writing and issued in the solicitation as addenda thereto.

No other means of communication, whether oral or written, shall be construed as a formal or official response/statement and may not be relied upon. SEND QUESTIONS TO:

Purchasing  
Post Office Box 421270,  
Georgetown, SC 29442-1270  
Fax: (843) 545-3500  
Email: [purch@gtcounty.org](mailto:purch@gtcounty.org)

2. Written sealed public bids for a Term Contract to provide Hagley West Drainage Improvements Phase 2 shall be received in the Purchasing Office, Second Floor, Suite 239, 129 Screven Street, Georgetown, SC until the cut-off time shown in the bid timeline on page (2) of this document. Bids will then be publicly and promptly opened at the designated time by the Purchasing Officer. Bids that are not in the Purchasing Officer's possession prior to the stated opening date and time will be considered **NON RESPONSIVE** and returned unopened. An official authorized to bind the offer must sign all proposals submitted.
3. IMPORTANT OFFEROR NOTES:
  - a) Bid Number & Title must be shown on the OUTSIDE of the delivery package.
  - b) Federal Express does NOT guarantee delivery to Georgetown, SC before 4:30 PM Eastern Time on Next Day Service.
  - c) UPS WILL guarantee delivery to Georgetown, SC before 10:30 AM Eastern Time on Next Day "Early AM" Service.
4. Inclement Weather/Closure of County Courthouse  
If the County Courthouse is closed for business at the time scheduled for bid opening, for whatever reason, sealed bids will be accepted and opened on the next scheduled business day, at the originally scheduled time.
5. This solicitation does not commit Georgetown County to award a contract, to pay any cost incurred in the preparation of the bid, or to procure or contract for goods or services. It is the responsibility of

each bidder to see that the Georgetown County Purchasing Office receives bids on, or before, the date and time specified for the bid opening. No bid will be accepted thereafter. The County assumes no responsibility for delivery of bids that are mailed. Georgetown County reserves the right to reject any or all bids and to waive any informalities and technicalities in the bid process.

6. One (1) unbound, reproducible ORIGINAL of bids must be submitted in a sealed envelope and clearly marked as follows:

**OFFEROR'S NAME**  
**BID ITEM NAME**  
**BID NUMBER**

7. No Bidder may submit more than one bid. Multiple bids for the different manufacturers but represented by the same firm will not be accepted. Bids offered directly from manufacturers shall indicate if a local dealer/representative will be involved.

8. Definitions:

- a) The terms "Proposer", "Offeror", or "Bidder" refer to those parties who are submitting sealed bids for the work set forth in this document to the OWNER, as distinct from a sub-bidder who provides a bid to the Bidder. The term "Contractor" refers to the successful Bidder.
- b) The term "Hagley West Drainage Improvements Phase 2" or "Project" refers to the **complete set of services** as specified in this document, in every aspect.
- c) The terms "Owner" and "County" refer to the County of Georgetown, South Carolina.
- d) Where the words "shall" or "must" are used, it signifies an absolute minimum function or capacity that, if not satisfied, may result in disqualification.
- e) Where the words "should", "may", or "is desirable" are used, it signifies desirable, but not mandatory functions or capacities. Bidders who are able to provide these functions or capacities may be evaluated more favorably than those who cannot.

9. Correction or Withdrawal of Bids; Cancellation of Awards

An offeror must submit in writing a request to either correct or withdraw a bid to the Procurement Officer. Each written request must document the fact that the offeror's mistake is clearly an error that will cause him substantial loss.

- a) Bids submitted prior to time and date designated for opening of Bids may be modified or withdrawn only by written notice to the individual receiving the Bids as identified in this Section 00100, Paragraph I, as stated above. Facsimile transmissions will be accepted only for the purpose of withdrawing Bids and only if received prior to time of Bid opening.
- b) Correction of awards: An offeror shall not be permitted to correct a bid mistake after bid opening that would cause such offeror to have the low bid unless the mistake in the judgment of the Procurement Officer is clearly evident from examining the bid document; for example, extension of unit prices or errors in addition.
- c) Cancellation of awards prior to performance: When it is determined after an award has been issued but before performance has begun that Georgetown County's requirements for the goods or services have changed or have not been met, the award or contract may be canceled and either re-awarded or a new solicitation issued.

10. Faxed or E-mailed bids will not be accepted by Georgetown County.
11. If you need any reasonable accommodation for any type of disability in order to participate in this procurement, please contact the purchasing office as soon as possible.
12. Any deviations from the specifications or modification of this bid and any extra or incidental work or reductions in work shall be set forth in writing and signed by both parties prior to making such change. Any increase or decrease in the bid price resulting from such change shall be included in writing.
13. Exceptions: The bidder shall list on a separate sheet of paper any variations from, or exceptions to, the conditions and specifications of this bid. This sheet shall be labeled "Exception(s) to Bid Conditions and Specifications," and shall be attached to the bid. When Proposers find instances where they must take exception with certain requirements or specifications of the bid, all exceptions shall be clearly identified. Written explanations shall include the scope of the exceptions, the ramifications of the exceptions for the County of Georgetown, and a description of the advantage to be gained or disadvantages to be incurred by the County as a result of these exceptions. If none, write "NONE".
14. Georgetown County reserves the right to reject any or all bids, and to waive as an informality any irregularities contained in any bids as may be deemed in the best interest of the County. Georgetown County further reserves the right to reject any bid submitted, at its sole option that the vendor may not be able to meet the service requirements of the bid.
15. Publicity releases: contractor agrees not to refer to award of any resulting contract in commercial advertising in such a manner as to state or imply that the products or services provided are endorsed or preferred by the user.
16. Material Safety Data Sheets: The County of Georgetown will not receive any materials, products, or chemicals which may be hazardous to an employee's health unless accompanied by a Material Data Sheet when received.
17. Ownership of Copyright: All right, title and interest in all copyrightable materials which vendor shall create in the performance of its obligations hereunder shall be the property of the procurer. Vendor agrees to assign and hereby does assign any and all interest it has in and to such material to procurer. Vendor agrees, upon the request of procurer to execute all papers and perform all other such acts necessary to assist procurer to obtain and register copyrights on such materials. Where applicable, works of authorship created by the vendor in the performance of its obligations hereunder, shall be considered "works for hire" as defined in the U.S. Copyright Act.
18. Ownership of Documents: Any reports, studies, photographs, negatives or other documents prepared by vendor in the performance of its obligations shall be the exclusive property of the procurer and all such material shall be remitted to the procurer by the vendor upon completion, termination or cancellation of this order. Vendor shall not use, willingly allow or cause to have such material used for any purpose other than performance of its obligations under this order without the prior written consent of the procurer.
19. Affirmative Action: The contractor will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees, without regard or discrimination by reason of age, race, color, religion, sex, national origin or physical handicap. The following are incorporated herein by reference: 41 C.F.R. 60-1.4, 60-250.4 and 60-741.4.

20. Bidders must clearly mark as "confidential" each part of their bid which they consider to be proprietary information that could be exempt from disclosure under section 30-4-40, Code of Laws of South Carolina 1976, as amended (Freedom of Information Act). If any part is designated as confidential, there must be attached to that part an explanation of how this information fits within one or more categories listed in section 30-4-40. The County reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against the County or its agents for its determination in this regard.
21. CERTIFICATION REGARDING DRUG-FREE WORKPLACE:  
The contractor certifies that the vendor(s) will provide a "drug-free workplace" as that term is defined in Section 44-107-30 of the Code of Laws of South Carolina, 1976, as amended, by the complying with the requirements set forth in title 44, Chapter 107.
22. Title VI Compliance:  
Georgetown County hereby gives public notice that it is the policy of the agency to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which Georgetown County receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with Georgetown County. Any such complaint must be in writing and filed with Georgetown County's Title VI Coordinator within one hundred and eighty (180) days following the date of the alleged discriminatory occurrence. For more information, or to obtain a Title VI Discriminatory Complaint Form, please see our website at <http://www.gtcounty.org>.
23. Nothing herein is intended to exclude any responsible vendor, his product or service or in any way restrain or restrict competition. On the contrary, all responsible vendors are encouraged to bid and their bids are solicited.
24. Acknowledgement of Addenda  
Each contractor is responsible to verify the number of total addenda issued prior to bid. **Failure to acknowledge all addenda shall disqualify the bidder.** All addenda are posted by the County at the website located at [www.georgetowncountysc.org](http://www.georgetowncountysc.org), select "Purchasing" and "Current Bids". It is each proposer's responsibility to verify that all addenda have been received and acknowledged.
25. Bids must be made on Proposal or Bid Form furnished or will be rejected. Proposals shall be typewritten or written in ink on the form prepared by the County. The person signing the bid shall initial all corrections or erasures.
26. Insurance  
The successful bidder shall procure, maintain, and provide proof of, insurance coverage for injuries to persons and/or property damage as may arise from or in conjunction with, the work performed on behalf of the County by the bidder, his agents, representatives, employees or subcontractors. Proof of coverage as contained herein shall be submitted fifteen (15) days prior to the commencement of work and such coverage shall be maintained by the bidder for the duration of the contract period; for occurrence policies.
- a. General Liability  
Coverage shall be as broad as: Comprehensive General Liability endorsed to include Broad Form, Commercial General Liability form including Products/Completed Operations.

1. Minimum Limits

General Liability:

- \$1,000,000 General Aggregate Limit
- \$1,000,000 Products & Completed Operations
- \$1,000,000 Personal and Advertising Injury
- \$1,000,000 Each Occurrence Limit
- \$50,000 Fire Damage Limit
- \$5,000 Medical Expense Limit

b. Automobile Liability

Coverage sufficient to cover all vehicles owned, used, or hired by the bidder, his agents, representatives, employees or subcontractors.

1. Minimum Limits

Automobile Liability:

- \$1,000,000 Combined Single Limit
- \$1,000,000 Each Occurrence Limit
- \$5,000 Medical Expense Limit

c. Workers' Compensation

Limits as required by the Workers' Compensation Act of SC. Employers Liability, \$1,000,000.

d. Owners' & Contractors' Protective Liability

n/a

e. Professional Liability

n/a

f. Coverage Provisions

1. All deductibles or self-insured retention shall appear on the certificate(s).
2. The County of Georgetown, its officers/ officials, employees, agents and volunteers shall be added as "additional insured" as their interests may appear. This provision does not apply to Professional Liability or Workers' Compensation/Employers' Liability.
3. The offeror's insurance shall be primary over any applicable insurance or self-insurance maintained by the County.
4. Shall provide 30 days written notice to the County before any cancellation, suspension, or void of coverage in whole or part, where such provision is reasonable.
5. All coverage for subcontractors of the bidder shall be subject to all of the requirements stated herein.
6. All deductibles or self-insured retention shall appear on the certificate(s) and shall be subject to approval by the County. At the option of the County, either; the insurer shall reduce or eliminate such deductible or self-insured retention; or the bidder shall be required to procure a bond guaranteeing payment of losses and related claims expenses.
7. Failure to comply with any reporting provisions of the policy(s) shall not affect coverage provided the County, its officers/officials, agents, employees and volunteers.

8. The insurer shall agree to waive all rights of subrogation against the County, its' officers/officials, agents, employees or volunteers for any act, omission or condition of premises which the parties may be held liable by reason of negligence.
9. The bidder shall furnish the County certificates of insurance including endorsements affecting coverage. The certificates are to be signed by a person authorized by the insurance company(s) to bind coverage on its' behalf, if executed by a broker, notarized copy of authorization to bind, or certify coverage must be attached.
10. All insurance shall be placed with insurers maintaining an A.M. Best rating of no less than an A:VII. If A.M. Best rating is less than A:VII, approval must be received from County's Risk Officer.

27. Workman's Compensation Coverage

Georgetown County, SC will require each contractor and service provider to maintain on file with the purchasing officer, a current Certificate of Insurance showing limits as required by the Workers' Compensation Act of SC: Employers Liability, \$1,000,000.

The law also recognizes "statutory employees." These are employees who work for a subcontractor who may be working for a business or another contractor. Employers should inquire whether or not a subcontractor working for them has workers' compensation insurance, regardless of the number of employees employed by the subcontractor. If the subcontractor does not, the subcontractor's injured employees would be covered under the employer's workers' compensation insurance. If the subcontractor does not carry workers' compensation insurance, then the owner or the principal contractor would be liable just as if the subcontractor's employee was one of their employees.

For answers to additional questions, visit the SC Worker's Compensation Commission website, at:

<http://www.wcc.sc.gov/Pages/FrequentlyAskedQuestions.aspx#emp1>

28. Hold Harmless Clause

The Contractor shall, during the term of the contract including any warranty period, indemnify, defend, and hold harmless the County, its officials, employees, agents, and representatives thereof from all suits, actions, or claims of any kind, including attorney's fees, brought on account of any personal injuries, damages, or violations of rights, sustained by any person or property in consequence of any neglect in safeguarding contract work or on account of any act or omission by the contractor or his employees, or from any claims or amounts arising from violation of any law, bylaw, ordinance, regulation or decree. The vendor agrees that this clause shall include claims involving infringement of patent or copyright.

29. Condition of Items

All items shall be new, in first class condition, including containers suitable for shipment and storage, unless otherwise indicated herein. Verbal agreements to the contrary will not be recognized.

30. Workmanship and Inspection

All work under this contract shall be performed in a skillful and workmanlike manner. The County may, in writing, require the Contractor to remove any employee from work that the County deems incompetent or careless.

Further, the County may, from time to time, make inspections of the work performed under this contract.

Any inspection by the County does not relieve the Contractor from any responsibility regarding defects or other failures to meet the contract requirements.

31. Invoicing and Payment

The firm shall submit invoices on a frequency to be determined, as agreed upon by the County, for each payment requested. Such invoice shall also include a detailed breakdown of all charges. All such invoices will be paid within thirty (30) days unless any items thereon are questioned, in which event payment will be withheld pending verification of the amount claimed and the validity of the claim. The firm shall provide complete cooperation during any such investigation. All invoices shall be forwarded to the following address:

County of Georgetown  
Accounts Payable  
P.O. Box 421270  
Georgetown, SC 29442-1270

Individual contractors shall provide their social security numbers, and proprietorships, partnerships, and corporations shall provide their federal employer identification number on the pricing form.

32. Progress Payments

Contractor's Application for Payment shall be submitted to the Owner on AIA Document G702 and G703--1992 Edition, or such other form as may be mutually agreed upon. The period covered by each Application for Payment shall be not less than one calendar month. The Owner shall make progress payments to the Contractor on undisputed amounts certified by the Architect within twenty-one (21) days from receipt of the Application for Payment by the Owner in accordance with Title 29, Chapter 6 of the Code of Laws of South Carolina, 1976, as amended.

33. South Carolina Sales Tax

The County of Georgetown, SC is not exempt and pays the appropriate SC sales tax on all applicable purchases. Assignment of Contract

This contract may not be assigned in whole or part without the written consent of the Purchasing Officer.

34. Assignment of Contract

This contract may not be assigned in whole or part without the written consent of the Purchasing Officer.

35. Termination

Subject to the provisions below, the contract may be terminated by the County upon thirty (30) days advance written notice to the other party; but if any work or service hereunder is in progress, but not completed as of the date of termination, then this contract may be extended upon written approval of the County until said work or services are completed and accepted.

a. Termination for Convenience

In the event that this contract is terminated or canceled upon request and for the convenience of the County, without the required thirty (30) days advance written notice, then the County shall negotiate reasonable termination costs, if applicable.

b. Termination for Cause

Termination by the County for cause, default or negligence on the part of the contractor shall be excluded from the foregoing provision; termination costs, if any, shall not apply. The thirty (30) days advance notice requirement is waived in the event of Termination for Cause.

c. Non-Appropriation:

It is understood and agreed by the parties that in the event funds are not appropriated in the current fiscal year or any subsequent fiscal years, this contract will become null and void and the County will only be required to pay for services completed to the satisfaction of the County.

36. Default

In case of default by the contractor, for any reason whatsoever, the County may procure the goods or services from another source and hold the contractor responsible for any resulting excess cost and may seek other remedies under law

37. Severability

In the event that any provision shall be adjudged or decreed to be invalid, such ruling shall not invalidate the entire Agreement but shall pertain only to the provision in question and the remaining provisions shall continue to be valid, binding and in full force and effect.

38. Applicable Laws

This Agreement shall be governed by and construed in accordance with the laws of the State of South Carolina, U.S.A.

39. Claims and Disputes:

All claims, disputes and other matters in question between parties arising out of, or relating to, this Agreement, or the breach thereof, shall be decided in the Circuit Court of the Fifteenth Judicial circuit in Georgetown County, South Carolina. By executing this Agreement, all parties specifically consent to venue and jurisdiction in Georgetown County, South Carolina and waive any right to contest jurisdiction and venue in said Court.

40. Rights of County

The County reserves the right to reject all or any part of any bid, waive informalities and award the contract to the lowest responsive and responsible bidder to best serve the interest of the County.

41. Award of Bid

In determining the lowest responsive and responsible bidder, in addition to price, there may be considered the following:

- (a) The ability, capacity and skill of the bidder to perform the contract.
- (b) Whether the bidder can perform the contract within the time specified, without delay of interference.
- (c) The character, integrity, reputation, judgment, experience and efficiency of the bidder.
- (d) The quality of performance on previous contracts.
- (e) The previous and existing compliance by the bidder with laws and ordinances relating to the contract.
- (f) The sufficiency of the financial resources to perform the contract to provide the service.
- (g) The quality, availability and adaptability of the supplies or contractual services to the particular use required.
- (h) The ability of the bidder to provide future maintenance and service.
- (i) The discount terms and conditions of the bid.
- (j) Delivery time.

42. Notice of Award

A *Notice of Intent to Award* will be mailed to all respondents.

43. Protest

Bidders may refer to Sections 2-67, 2-73, and 2-74 of Ordinance #2008-09, also known as the Georgetown County, South Carolina Purchasing Policy to determine their remedies concerning this competitive process. The failure to be awarded a bid shall not be valid grounds for protest.

44. Debarment

By submitting a bid, the offeror certifies to the best of its knowledge and belief, that it and its principals, sub-contractors and assigns are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal, State or local department or agency

45. Firm Pricing for County Acceptance

Bid price must be firm for County acceptance for 90 days from bid opening date. "Discount from list," bids are not acceptable unless specifically requested.

46. Quotations to be F.O.B.: Destination

Quote F.O.B.: Destination for this competitive sealed bid. As an alternate, show exact cost for delivery.

47. Unit Prices and Extension

Bid unit price on quantity specified -- extend and show total. In case of errors in extension, unit prices shall govern. Bids subject to unlimited price increases will not be considered.

48. Use of Brand Names (If Appropriate)

Unless otherwise stated in an Invitation for Bid, the name of a certain brand, make or manufacturer does not restrict bidders to the specific brand, make or manufacturer named; it conveys the general style, type, character, and quality of the article desired, and any article which the County in its sole discretion determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted. Any catalog, brand name or manufacturer's reference used in bid invitation is descriptive - NOT restrictive - it is to indicate type and quality desired. Bids on brands of like nature and quality will be considered. If bidding on other than reference or specifications, bid must show manufacturer, brand or trade name, catalog number, etc. of article offered. If other than brand(s) specified is offered, illustrations and complete description must be submitted with bid. Samples may be required. If bidder makes no other bid and takes no exception to specifications or reference data, he will be required to furnish brand names, numbers, etc., as specified. Bidders must certify that item(s) bid upon meet and/or exceed specifications.

49. Mobilization After Notice to Proceed

Bid must show the number of days required to mobilize after receiving a Notice to Proceed under normal conditions. Failure to state delivery time obligates bidder to complete delivery in fourteen (14) calendar days. Unrealistically short or long delivery promised may cause bid to be disregarded. Consistent failure to meet delivery promises without valid reason may cause removal from bid list.

50. Permits

The successful Offeror must be responsible for obtaining all necessary city, county, and state permits/licenses and must comply with all local codes and ordinances. Copies of such permits/licenses shall be made available to the County upon request. Building contractors working within Georgetown County must also secure a Contractor's License from the Building Department. Work within the Georgetown City Limits may require a City Business License. For additional information, please review the "Forms and Fees" section of the Building and Planning web page at the link below: <http://www.georgetowncountysc.org/building/default.html>

51. Environmental Management:

Vendor/Supplier/Contractor will be responsible for complying with all federal, state and local environmental regulations relating to transportation, handling, storage, spillage and any other aspect of providing the services specified herein, as applicable.

52. Bid Tabulation Results

Vendors wishing to view the bid tabulation results may visit the Georgetown County, SC web-site at: <http://www.georgetowncountysc.org>. Select "Purchasing", then "Bids Information" and double click the link under the individual bid listing.

53. The Bidder hereby certifies that he or she has carefully examined all of the Documents for the project, has carefully and thoroughly reviewed this Request for Bid/Quotation, has inspected the location of the project (if applicable), and understands the nature and scope of the work to be done; and that this Bid is based upon the terms, specifications, requirements, and conditions of the Request for Bid/ Documents. The Bidder further agrees that the performance time specified is a reasonable time, having carefully considered the nature and scope of the project as aforesaid.

54. Any attempt by the vendor to influence the opinion of County Staff or County Council by discussion, promotion, advertising, misrepresentation of the submittal or purchasing process or any procedure to promote their offer will constitute a violation of the vendor submittal conditions and will cause the vendor's submittal to be declared null and void.

55. Apparent omission of a detailed description concerning any point, shall be regarded as meaning the best commercial practice is to prevail and that only material and workmanship of the finest quality are to be used.

56. Response Clarification

Georgetown County reserves the right to request additional written or oral information from Bidders in order to obtain clarification of their Responses.

57. Georgetown County, SC has a Local Vendor Preference Option by ordinance:

**Sec 2-50. Local Preference Option**

1. A vendor shall be deemed a Local Georgetown County vendor for the purposes of this Section if Such vendor is an individual, partnership, association or corporation that is authorized to transact business within the State, maintains an office in Georgetown County, and maintains a representative inventory or commodities within the County on which the bid is submitted, and has paid all taxes duly assessed.
2. This option allows the lowest local Bidder whose bid is the lesser of \$10,000 or within five-percent (5%) of the lowest non-local Bidder to match the bid submitted by the non-local Bidder and thereby be awarded the contract. This preference shall apply only when (a) the total dollar

purchase is \$10,000 or more; (b) the vendor has a physical business address located and operating within the limits of Georgetown County and has been doing business in the County for a period of twelve (12) months or more; and (c) the vendor provides proof of payment of all applicable Georgetown County taxes and fees if so requested.

3. Should the lowest responsible and responsive Georgetown County bidder not exercise its right to match the bid as granted herein, the next lowest qualified Georgetown County bidder shall have that right and so on. The right to exercise the right to match the bid shall be exercised within 24 hours of notification of the right to match the non-Georgetown County bidder's bid.
4. In order to qualify for the local preference authorized by this Section, the vendor seeking same shall be required to submit with its bid a statement containing relevant information which demonstrates compliance with the provisions of this Section. This statement shall be on a form provided by the County purchasing department and shall be signed under penalty of perjury. Failure to provide such affidavit at the time the bidder submits its bid shall constitute a waiver of any claim for preference.
5. For all contracts for architecture, professional engineering, or other professional services governed by § 2-56, Architect-Engineer and Land Surveying Services – Public Announcement and Selection Process, the county shall include the local business status of a firm among the factors considered when selecting which firms are “most highly qualified.” In determining which firm is the “most qualified” for purposes of negotiating a satisfactory contract, preference shall be given to a local business where all other relevant factors are equal.
6. Local preference shall not apply to the following categories of contracts: (a) Goods or services provided under a cooperative purchasing agreement or similar “piggyback” contract; (b) Contracts for professional services except as provided for in section five (§5) above; (c) Purchases or contracts which are funded, in whole or in part, by a governmental or other funding entity, where the terms and conditions of receipt of the funds prohibit the preference; (d) Purchases or contracts made pursuant to a noncompetitive award process, unless otherwise provided by this section; or (e) Any bid announcement which specifically provides that the general local preference policies set forth in this section are suspended due to the unique nature of the goods or services sought, the existence of an emergency as found by either the county council or county administrator, or where such suspension is, in the opinion of the county attorney, required by law.

See the RESIDENCE CERTIFICATION FOR LOCAL PREFERENCE form attached for details.

58. Special Provisions and Conditions:

- a) Bidders shall be licensed as a General Contractor in the State of South Carolina and will hold all Trade Contracts and Building Permit(s) on the project.
- b) Trade Contractors (Prime and Sub-Contractors) shall be qualified to perform work contracted for and shall be licensed as such in the State of South Carolina.
- c) The contractor will be responsible for disposal of any and all removed, unused and surplus materials and any fees and transportation costs associated with the disposal.
- d) The contractor is responsible for contacting the Palmetto Utility Protection Service (P.U.P.S.) at its 811 or toll-free number (1-888-721-7877) between the hours of 7:30 am (ET) and 5:30 pm (ET), Monday through Friday, 72 hours before starting the proposed work.

59. Vendor Checklist

The items indicated below must be returned as a part of the Bid Submission package:

<u>SECTION</u>	<u>CONTENTS</u>
00300	Bid Submittal Form
Exhibit A	Addenda Acknowledgement
Exhibit B	Material Substitution Request
Exhibit C	Non-Collusion Affidavit
Exhibit D	Substitute IRS Form W-9
Exhibit E	Indemnification
Exhibit F	List of Prime and Sub-Contractors
Exhibit G	Statement of Experience
Exhibit H	Unit Price Schedule
Exhibit I	Resident Certification for Preference
Exhibit J	Exceptions page Form
Exhibit K	Electronic Data Transfer Disclaimer
00400	Bid Bond, Cashier's Check or Certified Check

Additionally, the successful contractor will be required to provide a Certificate of Insurance naming Georgetown County, SC as an additional insured. This must be on file prior to any final award.

**[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK.]**

**END OF SECTION 00100**



**SECTION 00200  
INTENT TO RESPOND**

**REF: BID#-18-043, Hagley West Drainage Improvements PH 2**

If your company intends to respond to this solicitation, please complete and promptly return this form to assure that you can be included on the mailing list to receive all addenda regarding this project.

It is not necessary to return any other portion of the bid documents if you are not bidding.

Failure to return the Intent to Respond shall not be sufficient cause to rule a submittal as nonresponsive; nor does the return of the form obligate an interested party to submit a response. Georgetown County's efforts to directly provide interested parties with addenda or additional information are provided as a courtesy only, and do not alleviate the respondent from their obligation to verify they have received and considered all addenda. All addenda are published and available on the county website at [www.georgetowncountysc.org](http://www.georgetowncountysc.org) select "purchasing" and "current bids".

Our firm **does** intend on responding to this solicitation.

Our firm **does not** intend on responding to this solicitation.

Company Name: \_\_\_\_\_

Printed Contact Name: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax Number: \_\_\_\_\_

E-Mail: \_\_\_\_\_

**Please return this completed form to Purchasing:**

- by e-mail to [purch@gtcounty.org](mailto:purch@gtcounty.org)
- or by FAX to (843)545-3500.

**[End of Intent to Respond]**



**SECTION 00300  
MANDATORY BID SUBMITTAL FORM**

**HAGLEY WEST DRAINAGE IMPROVEMENTS PHASE 2**  
**Bid #18-043**

The undersigned, on behalf of the vendor, certifies that: (1) this bid is made without previous understanding, agreement or connection with any person, firm or corporation making a bid on the same project; (2) is in all respects fair and without collusion or fraud; (3) the person whose signature appears below is legally empowered to bind the firm in whose name the bid is entered (4) they have read the complete Request for Bid and understand and accept all provisions: (5) if accepted by the County, this bid is guaranteed as written and amended and will be implemented as stated; and (6) mistakes in writing of the submitted bid will be their responsibility.

The undersigned, having visited the site of the Work and having familiarized themselves with local conditions affecting the cost of the work and with all requirements of the proposed Construction Contract Documents, and duly issued Addenda to said documents, as acknowledged herein, propose to furnish and perform all labor, materials, necessary tools, expendable equipment, and all utility and transportation services necessary to perform and complete in a workmanlike manner all work required by said documents and Addenda.

Name of Company submitting bid \_\_\_\_\_

**BASE BID PROPOSAL:** Bidder / Proposer agrees to perform all of the work described in the specifications, including allowances, and shown on the drawings, for the sum of:

\_\_\_\_\_ \$ \_\_\_\_\_

(words shall govern)

For additional work authorized after signing the Contract, the amount of overhead and the amount of profit to be added to base costs of labor and materials shall be (15%) total for overhead and profit on work performed by the Contractor's own forces and (10%) total on work by Subcontractors.

**COMPLETION DATE:** Contractor must conform with Division 0, Section 00750, Summary Schedule and Key Milestones.

**LIQUIDATED DAMAGES:** Liquidated damages for this project shall be five hundred dollars (\$500.00) per calendar day for Contractor's failure to complete any key milestone by its intermediate completion date or the Substantial Completion date. Refer to Division 1, Section 01100, Summary of Work.

The undersigned affirms that in making such Bid, neither he /she nor any company that they may represent, nor anyone in behalf of him / her or their company, directly or indirectly, has entered into any combination, collusion, undertaking or agreement with any other Bidder or Bidders to maintain the prices of said work, or any compact to prevent any other Bidder or Bidders from Bidding on said Contract or work and further affirms that such bid is made without regard or reference to any other Bidder or without any agreement or understanding or combination either directly or indirectly with any other person or persons with reference to such Bidding in any way or manner whatsoever.

The undersigned, when notified of the acceptance of this Bid proposal, does hereby agree to enter into a Contract with the Owner within five (5) calendar days from the date of the Notice of Award, for the execution of the work described within the period of time allocated, and he / she shall give a Performance Bond and Payment Bond, with good and sufficient surety.

The undersigned further agrees that if awarded the Contract he /she will commence the work within ten (10) calendar days after the date of the Notice to Proceed and that he / she will complete the work in accordance with the Summary Schedule and Key Milestones and Substantial Completion date set forth in the Bidding and Contract Documents or such amended date as may be granted. If the undersigned fails to complete the work as provided in the aforementioned schedule, then and in that event, he / she further expressly agrees that, for each day that any phase of work under this Contract remains uncompleted thereafter the Owner may deduct from the Contract price herein specified the stipulated sum of liquidated damages as provided for herein and retain that sum for failure of the undersigned to complete this Contract on or before the expiration of the period shown in the completion schedule.

The undersigned agrees that the Owner's damages caused by delay are not capable of being established and would be difficult to measure accurately and that the sums herein specified as liquidated damages are not a penalty, but represent the parties' estimate of the actual damages which the Owner would suffer per day if the work is not completed as scheduled.

In submitting this Bid, it is understood that the right is reserved by the Owner to waive any informality or irregularity in any Bid or Bid guaranty, to reject any and all Bids, to re-Bid, to award or refrain from awarding a contract for the work and to negotiate with the apparent qualified low responsive Bidder to such extent as may be beneficial to the Owner.

The undersigned attaches hereto a cashier's check, certified check or Bid Bond in the sum of \_\_\_\_\_ Dollars

(\$ \_\_\_\_\_), payable to Georgetown County, as required in the Request for Proposals, and the undersigned agrees that in case he / she fails within five (5) calendar days after Notice of Award of the Contract to him /her to enter into the Contract in writing and furnish the required Payment and Performance Bonds, with surety or sureties to be approved by Owner, and insurance policies or endorsements, the Owner may, as its option, determine that the undersigned has abandoned his / her rights and interest in such Bid and that the cashier's check, certified check, or Bid Bond accompanying his / her bid has been forfeited. Otherwise, the cashier's check, certified check, or Bid Bond shall be returned to the undersigned upon the execution of the Contract and acceptance of the bonds and insurance, or upon rejection of his / her Bid.

A Bid shall be considered unresponsive and shall be rejected if it fails to include fully executed statements or if the Bidder fails to furnish required data. When a determination has been made to award the Contract to a specific Contractor, such Contractor shall, prior to award, furnish such other pertinent information regarding his / her own employment policies and practices as well as those of his / her proposed prime contractor, subcontractors and consultants as the Owner may require.

The Bidder shall furnish similar statements executed by each of his / her prime contractor, first-tier and second-tier subcontractors and consultants whose contracts equal Ten Thousand Dollars (\$10,000.00) or more and shall obtain similar compliance by such prime contractor, subcontractors and consultants before awarding such contracts. No prime contract or subcontract shall be awarded to any non-complying prime contractor and/or subcontractor.

It is understood and agreed that all workmanship and materials under all items of work are guaranteed for one (1) year from the date of Final Acceptance, unless otherwise specified.

The undersigned affirms that he / she has completed all of the blank spaces on the Bid Submittal Form, with an amount in words and numbers and agrees that where a discrepancy occurs between the prices quoted in words and/or in numbers the lowest figure quoted in words shall take precedence and govern when determining final costs or award of the Contract. Contractor shall also submit a Schedule of Values as per Section 01331 with the "Bid Form".

The undersigned affirms that wages not less than the minimum rates or wages, as predetermined for this project by the State of South Carolina were used in the preparation of this "Bid Form".

**REQUIRED FORMS:** There are specific forms required to be completed and submitted as part of the response to this Request For Proposals (RFP). The omission, whether inadvertent or not, of any one or more of these forms will cause the Bidder's response to be disqualified. The following forms identified, as Exhibits to this RFP, shall be included in the response:

1. Exhibit A: Acknowledgement of Addenda
2. Exhibit B: Material Substitution Request
3. Exhibit C: Non-Collusion Affidavit
4. Exhibit D: Substitute. IRS Form W-9
5. Exhibit E: Indemnification
6. Exhibit F: List of Prime and Subcontractors
7. Exhibit G: Statement of Experience
8. Exhibit H: Unit Price Schedule
9. Exhibit I: Resident Certification for Preference
10. Exhibit J: Exceptions Page
11. Exhibit K: Electronic Data Transfer Disclaimer

Bid cost must remain valid ninety (90) days from bid opening date.

Additional Contractor Information:

1. LLR Contractor Number & Endorsements: \_\_\_\_\_
2. Contact Address: \_\_\_\_\_  
\_\_\_\_\_
3. Contact Person \_\_\_\_\_
4. Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_
5. E-Mail address \_\_\_\_\_
6. Remittance Address: \_\_\_\_\_  
\_\_\_\_\_
7. Accounting Contact \_\_\_\_\_
8. Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

9. E-Mail address \_\_\_\_\_
10. FEIN or Social Security Number: \_\_\_\_\_
11. Does your individual or company structure require the filing of a Form 1099 to the IRS on the part of Georgetown County, SC?                       **Yes**                       **No**
12. Acceptance of Invitation for Bid Content: The contents of the successful IFB/RPS are included as if fully reproduced herein. Therefore, the selected contractor must be prepared to be bound by his/her proposal as submitted.
13. **RENEWAL OF CONTRACT**  
The continuation of the terms, conditions, and provisions of any resulting contract beyond the fiscal year is subject to approval and ratification by the Georgetown County Council and appropriation by them of the necessary money to fund said contract for each
14. CERTIFICATION REGARDING DRUG-FREE WORKPLACE:  
The undersigned certifies that the vendor listed below will provide a “drug-free workplace” as that term is defined in Section 44-107-30 of the Code of Laws of South Carolina, 1976, as amended, by the complying with the requirements set forth in title 44, Chapter 107.
- Yes**                       **No**
15. Any attempt by the vendor to influence the opinion of County Staff or County Council by discussion, promotion, advertising, misrepresentation of the submittal or purchasing process or any procedure to promote their offer will constitute a violation of the vendor submittal conditions and will cause the vendor’s submittal to be declared null and void.
16. The lowest or any proposal will not necessarily be accepted and the County reserves the right to award any portion thereof. I/We, the undersigned, hereby confirm that all the above noted documents for Bid/Request for Proposal No. 18-043 were received.
17. **ILLEGAL IMMIGRATION: Non-Construction (NOV. 2008):** (An overview is available at [www.procurement.sc.gov](http://www.procurement.sc.gov)) By signing your offer, you certify that you will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agree to provide to the State upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable to you and your subcontractors or sub-subcontractors; or (b) that you and your subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 8-14-60, "A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony, and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both." You agree to include in any contracts with your subcontractors language requiring

your subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14. [07-7B097-1]

18. 

<p><u>INFORMATION ONLY:</u></p> <p><input type="checkbox"/> Our company accepts government procurement cards.</p> <p><input type="checkbox"/> Our company does not accept government procurement cards.</p>
---

19. Printed Name of person binding bid \_\_\_\_\_

20. Signature\* (X) \_\_\_\_\_

21. Date \_\_\_\_\_

**\*Important:** Execute acknowledgment of officer or agent who signs this document (use proper form on following pages)

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**ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION:**

State of: (\_\_\_\_\_)

Country of: (\_\_\_\_\_)SS

On this \_\_\_\_\_ day of \_\_\_\_\_, 2018 before me personally came and appeared \_\_\_\_\_ to me Known, who, being by me duly sworn, did depose and say to me that he resides at \_\_\_\_\_, that he/she is the \_\_\_\_\_ of \_\_\_\_\_ the corporation described in and which executed the foregoing instrument is an impression of such seal; that it was so affixed by the order of the directors of said corporation, and that he signed his name thereto by like order.

(Seal) \_\_\_\_\_  
Notary Public

**ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP:**

State of (\_\_\_\_\_)

Country of (\_\_\_\_\_)

On this \_\_\_\_\_ day of \_\_\_\_\_ 2018, before me personally came and appeared \_\_\_\_\_ to me known and known to me to described in and who executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal) \_\_\_\_\_  
Notary Public

**ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL:**

State of (\_\_\_\_\_)

Country of (\_\_\_\_\_)

On this \_\_\_\_\_ day of \_\_\_\_\_ 2018, before me personally came and appeared \_\_\_\_\_ to me known and known to me to be the person described in and who executed the forgoing instrument and acknowledged that he executed the same.

(Seal) \_\_\_\_\_  
Notary Public

**(Exhibits Continue on Following Pages)**

“EXHIBIT A”



**BID #18-043**  
**HAGLEY WEST DRAINAGE IMPROVEMENTS PHASE 2**

**ADDENDUM ACKNOWLEDGEMENT**  
**Mandatory Submittal Form**

COMPANY NAME: \_\_\_\_\_

- Addendum #1 Received Date: \_\_\_\_\_ Initialed By: \_\_\_\_\_
- Addendum #2 Received Date: \_\_\_\_\_ Initialed By: \_\_\_\_\_
- Addendum #3 Received Date: \_\_\_\_\_ Initialed By: \_\_\_\_\_
- Addendum #4 Received Date: \_\_\_\_\_ Initialed By: \_\_\_\_\_
- Addendum #5 Received Date: \_\_\_\_\_ Initialed By: \_\_\_\_\_
- Addendum #6 Received Date: \_\_\_\_\_ Initialed By: \_\_\_\_\_

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**“EXHIBIT B”**



**MATERIAL SUBSTITUTION REQUEST**

Project/Bid #: 18-043 \_\_\_\_\_

Date: \_\_\_\_\_

We hereby submit for your review the following PRODUCT SUBSTITUTION of the specified material for the above listed project.

Section: \_\_\_\_\_

Paragraph: \_\_\_\_\_

Specified Material: \_\_\_\_\_

Attached is complete technical data of the PRODUCT SUBSTITUTION, highlighted or underlined for easy reading, including laboratory test, as necessary, in duplicate. Included is complete information on changes to the Project Manual Documents required by the proposed PRODUCT SUBSTITUTION for its proper installation.

A) The Trade Contractor, under whose transmittal this information is sent, has reviewed the PRODUCT SUBSTITUTION and agrees it is applicable to this project in the location described and agrees to warrant/guarantee the use of the PRODUCT SUBSTITUTION in the same manner he would the Specified Product.

Yes                       No

If not, explain: \_\_\_\_\_

B) Does the PRODUCT SUBSTITUTION affect the dimensions shown on the Drawings in ANY WAY?

Yes                       No

If so, how? \_\_\_\_\_

C) Does the undersigned have the approval of the Manufacturer/Supplier to pay for any changes to the building design, including engineering and detailing costs, caused by the requested PRODUCT SUBSTITUTION?

Yes                       No

If so, to what extent? \_\_\_\_\_

D) What effect does the PRODUCT SUBSTITUTION acceptance have on other trades?

None                       Don't Know                       As follows:

\_\_\_\_\_



**“EXHIBIT C”**

**FORM OF NON-COLLUSION AFFIDAVIT OF PRIME BIDDER  
(Part of Proposal)**

**State of South Carolina )  
County of Georgetown )**

Being first duly sworn deposes and says that:

- (1) He / She is \_\_\_\_\_ of \_\_\_\_\_  
The Bidder that has submitted the attached Bid / Proposal;
- (2) He / She is fully informed respecting the preparation and contents of the attached Bid / Proposal and of all pertinent circumstances respecting such Bid / Proposal;
- (3) Such Bid / Proposal is genuine and is not a collusive or sham Bid / Proposal;
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder /, firm or person to submit a collusive or sham Bid / Proposal in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) \_\_\_\_\_

\_\_\_\_\_  
(Title)

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2018

Notary Public in and for Georgetown County, South Carolina

My commission expires on: \_\_\_\_\_



**“EXHIBIT D”  
SUBSTITUTE FOR FORM W-9  
MANDATORY BID SUBMISSION FORM**

Pursuant to Internal Revenue Service Regulations, you must furnish your Taxpayer Identification Number (TIN) to Georgetown County. If this number is not provided, you may be subject to a 28% withholding on each payment.

**INDIVIDUAL OR OWNER’S NAME** \_\_\_\_\_  
(Sole Proprietor Must Provide Individual Name along with Business Name)

**LEGAL BUSINESS NAME (d/b/a):** \_\_\_\_\_

**ADDRESS:** ( \_\_\_\_\_  
( \_\_\_\_\_  
( \_\_\_\_\_

**9 DIGIT TAXPAYER IDENTIFICATION NUMBER (TIN)**

(Individual Must Provide SS#; Sole Proprietorship may provide SS# or EIN#)

Social Security Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Employer Identification Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

**BUSINESS DESIGNATION**

- Individual, Sole Proprietor, or Single-Member LLC
- S-Corporation
- Trust/Estate
- Non-Profit Organization/501(a)
- Limited Liability Company: C = Corporation S = S Corporation P = Partnership
- C-Corporation
- Partnership
- Governmental Entity
- Other: \_\_\_\_\_

**(Must Circle the appropriate Tax Classification)**

**Exempt Payee Code (if any):** \_\_\_\_\_

(Exemption codes apply only to certain entities, not individuals; IRS W-9 instructions, page 3):

**PRINCIPAL BUSINESS ACTIVITY** (List Type of Service or Product Provided):

\_\_\_\_\_  MEDICAL SERVICES PROVIDER  ATTORNEY/LEGAL SERVICES PROVIDER

**CERTIFICATION** Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person; and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. *The Internal Revenue Service does not require your consent to any provision of this document other than the certifications required to avoid back-up withholding.*

Signature: \_\_\_\_\_

Date \_\_\_\_\_

**“EXHIBIT E”**

**INDEMNIFICATION  
(Part of Proposal)**

The Bidder will indemnify and hold harmless the Owner, Georgetown County, South Carolina and their agents and employees from and against all claims, damages, losses and expenses, including attorney’s fees, arising out of or resulting from the performance of the Work provided that any such claims, damages, loss, or expense is attributable to bodily injury, sickness, disease or death, injury to or destruction of tangible property, including the loss of use resulting therefrom, and is caused by any negligent or willful act or omission of the Bidder, and anyone directly or indirectly employed by him/her or anyone for whose acts any of them may be liable.

In any and all claims against the Owner, Georgetown County, South Carolina or any of their agents and / or employees by an employee of the Bidder and 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 to the amount or type of damages, compensation or benefits payable by or for the Bidder under the Worker’s Compensation Acts, Disability Benefit Acts, or other employee benefit acts.

The obligation of the Bidder under this paragraph shall not extend to the liability of Georgetown County, South Carolina or its agents and / or employees arising out of the reports, surveys, change orders, designs or technical specifications.

**BIDDER’S FIRM:** \_\_\_\_\_

**PRINTED NAME:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**SIGNATURE (X):** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**TELEPHONE NO.:** \_\_\_\_\_

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**“EXHIBIT F”**

**LIST OF PRIME AND SUBCONTRACTORS**  
(Part of Proposal)

The undersigned states that the following is a full and complete list of proposed prime contractor and sub-contractors on this Project and the class of work to be performed by each, and that such list will not be added to nor altered without the written consent of the Owner.

<u>Prime Contractor, Subcontractor Consultants and Address</u>	<u>Class of Work to be Performed</u>
1) _____ _____	_____ _____
2) _____ _____	_____ _____
3) _____ _____	_____ _____
4) _____ _____	_____ _____
5) _____ _____	_____ _____
6) _____ _____	_____ _____

**Dated:** \_\_\_\_\_

**Bidder:** \_\_\_\_\_

**Signed:** \_\_\_\_\_

**Title:** \_\_\_\_\_



**Hagley West Drainage Improvements Phase 2**  
**GEORGETOWN COUNTY, SOUTH CAROLINA**  
**RFP/BID # 18-043**

When changes in the work are ordered by the Owner, and such changes involve the following items, the following unit prices will be used to calculate adjustments to the Contract Sum. These unit prices shall be for the Work as specified, including all labor, materials, equipment, accessories, shipping, preparation, insurance, testing, overhead, profit, applicable taxes, permits, fees, warranties and all other associated costs for the finished and completed Work. All unit prices for utility conduits shall include sweeps, bends, couplings, caps, fittings, etc. which shall be included in the unit price per linear foot. Unit prices for undercut soils shall include material in place, surveyed and compacted pursuant to the Contract Documents.

Submit unit price and proposal amount for the following items. This list may not include all components necessary to provide a completed product, therefore any applicable items necessary to provide a completed product should be considered in your unit price response.

In case of errors in the extension of prices, unit price governs. In case of error in summations, corrected bid amounts will be totaled and will govern.

Contractor shall be responsible for all necessary electric and water hookups.

Contractor shall make quantity take-offs using drawings to determine quantities to his satisfaction, reporting promptly any discrepancies which may affect bidding. This is not a comprehensive list of items included in the contract documents, and represents only a portion of the project total.

**UNIT PRICE SCHEDULE.**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>Total Cost</b>
1.	Mobilization/staking/general conditions	LS	1	\$	
2.	Traffic Control	LS	1	\$	
3.	Dewatering	LS	1	\$	
4.	Dewatering/Pump Around/Sand Bags (Otter Run Rd)	LS	1	\$	
5.	Strip Topsoil	CY	1,200	\$	
6.	Clearing and Grubbing, tree removal (Otter Run Rd)	AC	0.15	\$	
7.	Remove Stormwater Pipe	LF	1,065	\$	
8.	Remove Conc. Headwall	EA	2	\$	
9.	Misc. Demolition (clearing, tree removal, SW Struct. Removal, etc.)	LS	1	\$	
10.	Beaver Dam Removal (Otter Run Rd, approx.. 150 LF)	LS	1	\$	
11.	Remove Driveway/Road - Asphalt/Concrete	SY	755	\$	
12.	Hydroseeding	SF	86,425	\$	

Item	Description	Unit	Quantity	Unit Price	Total Cost
13.	Orange Safety Fence	LF	3,630	\$	
14.	SC150 Erosion Control Matting in Ditch	SY	2,470	\$	
15.	Riprap Pipe Outlet Protection	SY	75	\$	
16.	Stabilized Construction Entrance	EA	1	\$	
17.	Sediment Tubes	EA	32	\$	
18.	Concrete Washout	EA	1	\$	
19.	Inlet Protection	EA	12	\$	
20.	Silt Fence Rock Outlet (Otter Run Rd)	EA	1	\$	
21.	Silt Fence (Otter Run Rd)	LF	500	\$	
22.	18" RCP Drainage Pipe	LF	360	\$	
23.	24" RCP Drainage Pipe	LF	80	\$	
24.	30" RCP Drainage Pipe	LF	28	\$	
25.	42" RCP Drainage Pipe	LF	45	\$	
26.	24"x48" Conc. Box Culvert	LF	1180	\$	
27.	Beveled Pipe Ends inc. Riprap & Geotextile Fabric	EA	37	\$	
28.	Custom 8'x10' Drop Inlet Struct.	EA	1	\$	
29.	Connect 42" RCP to Ex. Struct.	EA	1	\$	
30.	Connect ex. 15" CPP to box culvert/stub	EA	1	\$	
31.	Drop Inlets (inc. through top of box culvert)	EA	9	\$	
32.	Connect 42" CPP to Custom Drop Inlet	EA	2	\$	
33.	Asphalt Paving for Driveways	SY	280	\$	
34.	Concrete Paving for Driveways	SY	175	\$	
35.	Asphalt Paving for SCDOT Roadways	SY	225	\$	
36.	1.5" Asphalt Overlay for pipe crossings	SY	1925	\$	
37.	Fine Grading (driveways, road, swales)	SY	9,560	\$	
38.	Fine Grading (Otter Run Rd, Spillway Area and Access)	SY	600	\$	
39.	Storm Pipe Road Crossing	EA	4	\$	
40.	Flowable Fill around road pipe crossings	CY	80	\$	
41.	Sanitary Sewer Service Relocation	EA	10 (est.)	\$	
42.	Water Service Relocation	EA	10 (est.)	\$	

Item	Description	Unit	Quantity	Unit Price	Total Cost
43.	6" Water Main Vertical Relocation	EA	3 (est.)	\$	
44.	8" Water Main Vertical Relocation	EA	3 (est.)	\$	
45.	10" Water Main Vertical Relocation	EA	3 (est.)	\$	
46.	12" Water Main Vertical Relocation	EA	3 (est.)	\$	
47.	Misc. relocations, working around exist. Utilities, shoring	LS	1	\$	

Total for Construction = \_\_\_\_\_

Bidder/Proposer: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Dated: \_\_\_\_\_

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## “EXHIBIT I”

### RESIDENCE CERTIFICATION FOR LOCAL PREFERENCE

#### MANDATORY VENDOR SUBMITTAL FORM

WHEREAS, Georgetown County Council desires to further its support of local businesses when awarding contracts for the provision of supplies and construction services to the County through its established procurement procedures.

THEREFOR pursuant to Georgetown County, SC Ordinance #2010-45 as adopted, §2-50 Local Preference Option, the Georgetown County Purchasing Officer requests each offeror provide Residence Certification. The Local Preference Option provides some restrictions on the awarding of governmental contracts; provisions of which are stated below:

#### **Sec 2-50. Local Preference Option**

5. A vendor shall be deemed a Local Georgetown County vendor for the purposes of this Section if such vendor is an individual, partnership, association or corporation that is authorized to transact business within the State, maintains an office in Georgetown County, and maintains a representative inventory or commodities within the County on which the bid is submitted, and has paid all taxes duly assessed.
6. This option allows the lowest local Bidder whose bid is the lesser of \$10,000 or within five percent (5%) of the lowest non-local Bidder to match the bid submitted by the non local Bidder and thereby be awarded the contract. This preference shall apply only when (a) the total dollar purchase is \$10,000 or more; (b) the vendor has a physical business address located and operating within the limits of Georgetown County and has been doing business in the County for a period of twelve (12) months or more; and (c) the vendor provides proof of payment of all applicable Georgetown County taxes and fees if so requested.
7. Should the lowest responsible and responsive Georgetown County bidder not exercise its right to match the bid as granted herein, the next lowest qualified Georgetown County bidder shall have that right and so on. The right to exercise the right to match the bid shall be exercised within 24 hours of notification of the right to match the non Georgetown County bidder's bid.
8. In order to qualify for the local preference authorized by this Section, the vendor seeking same shall be required to submit with its bid a statement containing relevant information which demonstrates compliance with the provisions of this Section. This statement shall be on a form provided by the County purchasing department and shall be signed under penalty of perjury. Failure to provide such affidavit at the time the bidder submits its bid shall constitute a waiver of any claim for preference.
5. For all contracts for architecture, professional engineering, or other professional services governed by § 2-56, Architect-Engineer and Land Surveying Services – Public

Announcement and Selection Process, the county shall include the local business status of a firm among the factors considered when selecting which firms are “most highly qualified.” In determining which firm is the “most qualified” for purposes of negotiating a satisfactory contract, preference shall be given to a local business where all other relevant factors are equal.

6. Local preference shall not apply to the following categories of contracts:
- (a) Goods or services provided under a cooperative purchasing agreement or similar “piggyback” contract;
  - (b) Contracts for professional services except as provided for in section five (§5) above;
  - (c) Purchases or contracts which are funded, in whole or in part, by a governmental or other funding entity, where the terms and conditions of receipt of the funds prohibit the preference;
  - (d) Purchases or contracts made pursuant to a noncompetitive award process, unless otherwise provided by this section; or
  - (e) Any bid announcement which specifically provides that the general local preference policies set forth in this section are suspended due to the unique nature of the goods or services sought, the existence of an emergency as found by either the county council or county administrator, or where such suspension is, in the opinion of the county attorney, required by law.

I certify that [Company Name] \_\_\_\_\_ is a **Resident Bidder** of Georgetown County as defined in Ordinance #2008-09, and our principal place of business is \_\_\_\_\_ [City and State].

I certify that [Company Name] \_\_\_\_\_ is a **Non-Resident Bidder** of Georgetown County as defined in Ordinance #2008-09, and our principal place of business is \_\_\_\_\_ [City and State].

\_\_\_\_\_  
Signature of Company Officer

**“EXHIBIT J”**

**EXCEPTIONS PAGE**

**MANDATORY BID SUBMISSION FORM**

List any areas where you cannot or will not comply with the specifications or terms contained within the bid documentation.

**EXHIBIT K**

**ELECTRONIC DATA TRANSFER DISCLAIMER NOTICE**

**MANDATORY BID SUBMISSION FORM**

Attn: Purchasing  
Georgetown County Purchasing Office  
129 Screven Street  
Georgetown, SC 29440

**Disclaimer:**

Georgetown County is providing, by agreement with certain parties, materials stored electronically. The parties recognize that data, plans, specifications, reports, documents, or other information recorded on or transmitted as electronic media (including but not necessarily limited to "CAD documents") are subject to undetectable alteration, either intentional or unintentional, due to, among other causes, transmission, conversion, media degradation, software error, or human alteration. Accordingly, all such documents are provided to the parties for informational purposes only and not as an end product or as a record document. Any reliance thereon is deemed to be unreasonable and unenforceable. These files do not include a professional surveyor's/engineer's stamp and only drawings with such stamp are to be considered as true and final. Georgetown County is not responsible for edited or reproduced versions of this digital data.

\_\_\_\_\_ (Company Name) understands that the use of any project related computer data constitutes acceptance of the above terms and conditions.

\_\_\_\_\_  
(PRINT NAME)

\_\_\_\_\_  
(OFFICE TITLE)

\_\_\_\_\_  
(SIGNATURE)

\_\_\_\_\_  
(DATE)

\_\_\_\_\_  
(OFFICE PHONE)

\_\_\_\_\_  
(OFFICE FAX)

**END OF SECTION 00300**



PRINCIPAL (If Sole Proprietor or Partnership)

(Firm Name)

ATTEST

By: \_\_\_\_\_  
(SEAL)

\_\_\_\_\_

\_\_\_\_\_  
Title (Sole Proprietor or Partner)

PRINCIPAL (If Corporation)

\_\_\_\_\_  
(Corporate Name)

By: \_\_\_\_\_  
(President)

Attest: \_\_\_\_\_  
(Secretary)

(Impress Corporate Seal)

COUNTERSIGNED BY  
RESIDENT SOUTH CAROLINA  
AGENT OF SURETY:

SURETY:

\_\_\_\_\_  
(Copy of Agent's current license  
as issued by State of South Carolina  
Insurance Commissioner

By: \_\_\_\_\_  
Attorney-In-Fact  
(Power of Attorney Must Be Attached)

(Impress Corporate Seal)

**END OF SECTION 00400**

## SECTION 00500

### CONTRACT

**THIS CONTRACT** made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2018, by and between Georgetown County, hereinafter referred to as the "Owner", a body politic and corporate and political subdivision of the State of South Carolina, whose administrative address is: 129 Screven Street Georgetown, South Carolina 29442; and, \_\_\_\_\_ hereinafter referred to as the "Contractor", a corporation formed and existing under the laws of the State of \_\_\_\_\_ and authorized to do business within the State of South Carolina, whose administrative address is:

#### WITNESSETH:

**WHEREAS**, the Owner has a project entitled Hagley West Drainage Improvements Phase 2, Georgetown, SC hereinafter referred to as the "Project", and;

**WHEREAS**, the Contractor has submitted the lowest responsible and responsive bid for the Project at \$ \_\_\_\_\_ and the Owner has awarded the Project to the Contractor; and

**NOW, THEREFORE**, in consideration of the mutual promises and covenants contained herein, as well as other good and valuable consideration not specifically mentioned, the parties agree as follows:

1. The Contractor, for and in consideration of the payments hereinafter specified and agreed to be made by the Owner, hereby covenants and agrees to furnish and deliver all materials required, to do and perform all the work and labor, in a satisfactory and workmanlike manner, required to complete the Project within the time specified, in strict and entire conformity with the Construction Contract Documents, on file at the Office of the Purchasing Dept., Georgetown County, which are duly approved by the Owner and which said Project Manual, Drawings, Technical Specifications and other Contract Documents are hereby made part of this Contract as fully and with the same effects as if the same had been set forth at length in the body of this Contract.
2. The Contractor hereby agrees to indemnify, defend and hold the Owner and its agents, representatives and employees harmless from any and all liabilities, losses, damages, penalties, judgments, awards, claims, demands, costs, expenses, including reasonable attorney's fees and court costs, actions, lawsuits or other proceedings arising directly or indirectly, in whole or in part, out of the negligence or willful acts or omissions of the Contractor, its prime contractor, trade subcontractors and consultants or their respective agents, directors, officers or employees in connection with this Contract or in any way with the services or Work described herein, any occurrence at the Project site, or any occurrence arising in connection with or at the Project site or in connection with the Work, whether within or beyond the scope of its duties hereunder.
3. The Contractor's indemnity and defense obligations under this Contract shall be absolute notwithstanding any provision contained herein or elsewhere to the contrary, and shall survive Final Completion and Final Payment for a period equal to the statute of limitations for any action which could be brought against the Owner or its agents, officers, directors and employees and shall continue through the duration of any action brought during the applicable time periods.
4. The Contractor agrees to indemnify, defend and hold the Owner and its agents, representatives, officers, directors and employees harmless from all costs, damages and expenses, including reasonable

attorney's fees, incurred by the Owner and its consultants by virtue of any claim or claims filed by any trade prime or subcontractor, mechanic, laborer, or material-man making claims arising from the performance of the Work by, through, or under the Contractor, provided the Contractor has received from the Owner all amounts properly due under this Contract concerning the claim. The Contractor shall execute and deliver to the Owner's title insurer similar indemnifications or such other document as such title insurer shall reasonably request in order to protect it against lien claims from trade prime or subcontractors. The Contractor also hereby agrees to indemnify and hold harmless, protect and defend the Owner and its consultants from and against any liability, claim, judgment, loss or damage, including, but not limited, to direct damages, attorney's fees, court costs and expenses of collection, occasioned in whole or in part by the sole failure of the Contractor, and its trade prime or subcontractors to comply with any of the terms or provisions of this Contract.

5. In any and all claims against the Owner by any employee of the Contractor or trade prime or subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 2 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 trade prime or subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

6. The Owner hereby agrees to pay to the Contractor for the said work, when fully completed, the total sum of \$\_\_\_\_\_ (the said sum being the total of the Contractor's bid, a copy of which is attached hereto and made a part hereof for all purposes), subject to such additions and deductions as may be provided for in the Construction Contract Documents. In the event the Bid contains multiple pay items, it is understood that the amount to be paid shall be the total based on the unit prices, together with lump sum prices, contained in said bid, for the work actually completed. Payments on accounts will be made as provided for in the Construction Contract Documents, Project Manual, Division 1, General Requirements, Section 01290, Payment Procedures. The Contractor shall submit bills for fees or other compensation for services or expenses in detail sufficient for a proper pre-audit and post audit thereof. Any unit of provision of goods and services must be approved in writing by the Owner prior to payment.

7. The Owner may unilaterally cancel this Contract and the goods and services there under in the event that the Contractor fails and refuses to allow public access to all documents, papers, letters, or other material subject to the provisions of the applicable South Carolina Statutes, made or received by the Contractor in conjunction with this Contract.

8. The Construction Contract Documents provide the criteria and the final date for completion of the Work of the Project

9. This Contract has been executed by the parties prior to the rendering of any goods or services by the Contractor.

10. The Contractor shall provide a labor and material payment bond and performance bond (the Bond) to the Owner meeting the requirements of Applicable South Carolina Statute in the sum of \$\_\_\_\_\_ and shall cause the Bond to be recorded with the Notice of Award in the Public Records of Georgetown County, South Carolina

11. This Contract shall be subordinate to any rule, regulation, order or law of the United States of America, or the State of South Carolina.

12. Contractor and its employees shall promptly observe and comply with then applicable provisions of all Federal, State and local laws, rules and regulations which govern or apply to the goods and services rendered by the Contractor hereunder, or to the wages paid by the Contractor to its employees.

Contractor shall require all of its prime and subcontractors and consultants to comply with the provisions of this paragraph.

13. Contractor shall procure and keep in force during the term of this contract all necessary licenses, registrations, certificates, permits and other authorizations as are required by law in order for Contractor to render its services hereunder. Contractor shall require all of its prime and subcontractors and consultants to comply with the provisions of this paragraph.

14. All remedies provided in this Contract shall be deemed cumulative and additional and not in lieu of or exclusive of each other or of any other remedy available to any party at law or in equity. In the event one party shall prevail in any action (including appellate proceedings), at law or in equity arising hereunder, the losing party will pay all costs, expense, reasonable attorneys' fees and all other actual and reasonable expenses incurred in the defense and/or prosecution of any legal or arbitration proceedings, including, but not limited to, those for paralegal, investigate and legal support services and actual fees charged by expert witnesses for testimony and analysis, incurred by the prevailing party referable thereto.

15. Contractor represents and warrants unto Owner that no officer, employee or agent of Owner has any interest, either directly or indirectly, in the business of the Contractor to be conducted hereunder. Contractor further represents and warrants to Owner that it has not employed or retained any company person, other than a bona fide employee working solely for Contractor, to solicit or secure this Contract, that it has not paid or agreed to any person, company, corporation, individual or firm, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Contract, and that it has not agreed, as an express or implied condition for obtaining this Contract, to employ or retain the services of any firm or person in connection with carrying out this Contract. Contractor assures that it will insert the above provision in each of its prime and subcontractor and consultants' agreements relating to the services to be performed hereunder.

16. The headings of the sections of this Contract are for the purpose of convenience only and shall not be deemed to expand or limit the provisions contained in such sections.

17. This Contract, including all Contract documents, constitute the entire understanding and agreement between the parties and shall supersede and replace all prior agreements or understandings, written or oral, relating to the matters set forth herein.

18. This Contract shall not be amended or modified other than in writing signed by the parties hereto. Notwithstanding the foregoing, any Amendments that are not being paid for, in whole or in part, with funds granted by the United States of America or State of South Carolina need not be approved by them.

19. The validity, interpretation, construction and effect of this Contract shall be in accordance with and be governed by the laws of the State of South Carolina. In the event any provision hereof shall be finally determined to be unenforceable, or invalid, such unenforceability or invalidity shall not affect the remaining provisions of this Contract which shall remain in full force and effect.

## 20. Termination of Contract

- a) The Owner may, by written notice, terminate this Contract in whole or in part at any time, either for the Owner's convenience or because of failure to fulfill the Contract obligations. Upon receipt of such notice, services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in Performed this Contract, whether completed or in process, delivered to the Owner.

- b) Contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.
- c) If the termination is due to failure to fulfill the Contractor's obligations, the Owner may take over the work and prosecute the same to completion by contract or otherwise. In such case, the Contractor shall be liable to the Owner for any additional cost occasioned to the Owner thereby.
- d) If, after notice of termination for failure to fulfill its Contract obligations, it is determined that the Contractor had not failed, the termination shall be deemed to have been effected for the convenience of the Owner. In such event, adjustment in the Contract price shall be made as provided in paragraph 21.a of this clause.
- e) The rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract.
- f) **Non-Appropriation**  
It is understood and agreed by the parties that in the event funds are not appropriated in the current fiscal year or any subsequent fiscal years, this contract will become null and void and the County will only be required to pay for services completed to the satisfaction of the County

21. **Waiver or Forbearance**

Any delay or failure of County to insist upon strict performance of any obligation under this Agreement or to exercise any right or remedy provided under this Agreement shall not be a waiver of County's right to demand strict compliance, irrespective of the number or duration of any delay(s) or failure(s). No term or condition imposed on Contractor under this Agreement shall be waived and no breach by Contractor shall be excused unless that waiver or excuse of a breach has been put in writing and signed by both parties. No waiver in any instance of any right or remedy shall constitute waiver of any other right or remedy under this Agreement. No consent to or forbearance of any breach or substandard performance of any obligation under this Agreement shall constitute consent to modification or reduction of the other obligations or forbearance of any other breach.

22. **TITLE VI COMPLIANCE:**

Georgetown County hereby gives public notice that it is the policy of the agency to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which Georgetown County receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with Georgetown County. Any such complaint must be in writing and filed with Georgetown County's Title VI Coordinator within one hundred and eighty (180) days following the date of the alleged discriminatory occurrence. For more information, or to obtain a Title VI Discriminatory Complaint Form, please see our website at <http://www.gtcounty.org>.

IN WITNESS WHEREOF, the Owner and Contractor hereto have signed and sealed this Contract on the day and date first above written in three counterparts, each deemed an original contract.

**Georgetown County**

\_\_\_\_\_  
Witness:

By:\_\_\_\_\_

Title:\_\_\_\_\_

**Contractor**

\_\_\_\_\_  
Witness:

By:\_\_\_\_\_

Title:\_\_\_\_\_

(SEAL)

END OF SECTION 00500

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**SECTION 00600**

**PERFORMANCE BOND**

BOND NO. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS that we, \_\_\_\_\_ as Principal, and \_\_\_\_\_ as Surety, are held and firmly bound unto Georgetown County, South Carolina hereinafter called the Obligee, in the Penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally firmly by these presents.

WHEREAS, the Principal, on the \_\_\_\_\_ day of \_\_\_\_\_, 2018 entered into a certain Contract with the Owner, included herein, for the Contract entitled Hagley West Drainage Improvements Phase 2, Georgetown, Georgetown County, South Carolina.

NOW THEREFORE, the condition of this obligation is such that if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Contract, and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation shall be void; otherwise, to remain in full force and effect.

Whenever the Principal shall be and is declared by the Owner to be in default under the Contract, or wherever the contract has been terminated by default of the Contractor, the Owner having performed the Owner's obligations hereunder, the Surety shall:

1. Complete the Contract in accordance with its terms and conditions, or at the Owner's sole option.
2. Obtain a Bid or Bids for submission to the Owner for completing the Contract in accordance with its terms and conditions, and upon determination by the Owner and Surety of the lowest responsible Bidder, arrange for a Contract between such Bidder and the Owner, and made available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost completion less the balance of the Contract price but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term balance of the Contract price: as used in this paragraph, shall mean the total amount payable by the Owner to the Contractor under the Contract and any amendments thereto, less the amount properly paid by the Owner to the Contractor.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Owner named herein or the successors or assignees thereof.

In the case of termination of the Contract, as provided in the Construction Contract Documents, there shall be assessed against the Principal and Surety herein, all expenses, including design/engineering, geo-technical, surveying, and legal services incidental to collecting losses to the Owner under this Bond.

This Bond shall remain in full force and effect for such period or periods of time after the date of acceptance of the project by the Owner as are provided for in the Construction Contract Documents,

and the Principal hereby guarantees to repair or replace for the said periods all work performed and materials and equipment furnished, which were not performed or furnished according to the terms of the Construction Contract Documents. If no specific periods of warranty are stated in the Construction Contract Documents for any particular item of work, material, or equipment, the Principal hereby guarantees the same for a minimum period of one (1) year from the date of final acceptance by the Owner.

The Surety shall permit arbitration and be ultimately responsible for the payment of any award.

IN WITNESS WHEREOF, the above bounden parties have caused this Bond to be signed and sealed by their appropriate officials as of the \_\_\_\_\_ day of \_\_\_\_\_, 2018.

PRINCIPAL

\_\_\_\_\_  
(Firm Name)

By: \_\_\_\_\_

WITNESS

\_\_\_\_\_  
(Title)

SURETY

\_\_\_\_\_  
(Firm Name)

By: \_\_\_\_\_

WITNESS

\_\_\_\_\_  
(Title)

**END OF SECTION 00600**

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**SECTION 00601**

**LABOR AND MATERIAL PAYMENT BOND**

BOND NO. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS that we, \_\_\_\_\_ as Principal, and \_\_\_\_\_ as Surety, are held and firmly bound unto Georgetown County, South Carolina hereinafter called the Obligee, in the Penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally firmly by these presents.

WHEREAS, the Principal, on the \_\_\_\_\_ day of \_\_\_\_\_, 2018 entered into a certain Contract with the Owner, included herein, for Contract entitled Hagley West Drainage Improvements Phase 2, Georgetown, Georgetown County, South Carolina

NOW THEREFORE, the condition of this obligation is such that if the Principal shall promptly make payments to all persons supplying labor, materials and supplies used directly or indirectly by said Principal or his Subcontractors in the prosecution of the work provided for in said Contract, then this obligations shall be void; otherwise to remain in full force and effect, subject, however, to the following conditions:

1. This bond is executed for the purpose of complying with the applicable State of South Carolina Statutes and all acts amendatory thereof, and this Bond shall inure to the benefit of any and all persons supplying labor, material and supplies used directly or indirectly by the Principal or his Subcontractors in the prosecution of the work provided for in said Contract so as to give such persons a right of action to recover upon this Bond in a separate suit brought on this Bond. No right of action shall accrue hereunder to or for the use of any person except as such right of action may be given and limited by the applicable State of South Carolina Statutes.
2. In each and every suit brought against the Principal and Surety upon this Bond in which the plaintiff shall be successful, there shall be assessed therein against the Principal and Surety herein, in favor of the Plaintiff therein, reasonable counsel fees, which the Principal and Surety hereby expressly agree to pay as a part of the cost and expense of said suit.
3. A claimant, except a laborer, who is not in privity with the Principal and who has not received payment for his labor, materials, or supplies, shall, within forty-five (45) calendar days after beginning to furnish labor, materials, or supplies for the prosecution of the work, furnish the Principal with a notice that he intends to look to the bond for protection.
4. A claimant who is not in privity with the Principal and who has not received payment for his labor, materials or supplies shall, within ninety (90) calendar days after performance of the labor or after complete delivery of the materials or supplies, deliver to the Principal and to the Surety written notice of the performance of the labor or delivery of the materials or supplies and of the non-payment.
5. No action for the labor, materials, or supplies may be instituted against the Principal or the Surety unless both notices have been given. No action shall be instituted against the Principal or the Surety on

the bond after one (1) year from the performance of the labor or completion of delivery of the materials or supplies.

The Surety shall permit arbitration and be ultimately responsible for the payment of any award.

IN WITNESS WHEREOF, the above bounden parties have caused this Bond to be signed and sealed by their appropriate officials as of the \_\_\_\_\_ day of \_\_\_\_\_, 2018.

**PRINCIPAL**

\_\_\_\_\_  
(Firm Name)

\_\_\_\_\_  
(Witness)

By: \_\_\_\_\_  
(Title)

**SURETY**

\_\_\_\_\_  
(Firm Name)

\_\_\_\_\_  
(Witness)

By: \_\_\_\_\_  
(Title)

**END SECTION 00601**

**SECTION 00750**

## **SUMMARY SCHEDULE AND KEY MILESTONES**

### **1.0 GENERAL**

#### **1.01 THIS SECTION INCLUDES**

- A. Summary Submittals
- B. Key Milestones
- C. Base Bid Summary Schedule
- D. Alternate Summary Schedule (If Applicable)

#### **1.02 SUMMARY SCHEDULE**

- A. Summary Schedules referred to in this section will be developed by the Contractor and the Owner illustrating an approach to constructing the project. The activities to be shown on the schedules will be monitored by the Owner and updated by the Contractor.
- B. Milestones shown on the Summary Schedules will be “Key Milestones” and are to be included in the Contractor’s Contract Schedule. The Contractor is responsible to develop his/her own activities and logic to meet the required Key Milestone Intermediate Dates. Refer to Division 1, Section 01310, Project Management and Coordination.
- C. The Contractor shall complete the Work of the project within ninety (90) calendar days from written receipt of Notice to Proceed. \$500.00 per day will be assessed for each day that completes beyond that date. Refer to Division 1, Section 01100 and Summary of Work.

#### **1.03 KEY MILESTONES**

- A. Key Milestones shall be included in all Contractor Schedules and show completing on the intermediate dates shown in this Section.
- B. Key Milestones are a contractual requirement and liquidated damages of \$500.00 per day will be assessed for each Key Milestone that completes beyond the dates listed below. Refer to Division 1, Section 01100 and Summary of Work.
- C. Key Milestones for the Base Bid are as follows:
  - 1. Complete placement of storm drain, sewer, and utility system and associated erosion control measures (BMP’s), one hundred-eighty (180) Calendar days from Notice to Proceed.
  - 2. Complete grading activities, paving, striping, and landscaping, (210) Calendar days from Notice to Proceed

**END OF SECTION 00750**

## SECTION 00800

### SPECIAL PROJECT CONDITIONS

#### 1.0 PURPOSE

The Special Project Conditions are intended to identify those elements of work and items of material, and responsibilities of the Contractor, which are unique to the Hagley West Drainage Improvements Phase 2 and required by the Contract Documents. They are intended to supplement those contractual requirements contained within the Construction Contract Documents including, but not limited to: the Contract; Division 1, General Requirements, Drawings and Technical Specifications.

#### 2.0 SAFETY AND SECURITY

##### 2.0.1 ENTRY ONTO THE PROJECT SITE

Entry onto the project site shall be from road asphalt surface through drainage easements along Halloween ditch. The Contractor shall be responsible for the security of all materials and equipment to be used for the Work of the Project. Vehicles to be allowed on the Project site will include only those of the Contractor, prime and sub-contractors and those designated by the Owner. Contractor shall have sole responsibility for the safety of vehicles in close vicinity and within the projects Limits of Disturbance.

##### 2.0.2 STORAGE / STAGING AREA

All construction material, either the Contractor's, prime and sub-contractor's vehicles and equipment, and personal vehicle parking areas will be established and regulated by the Contractor and approved by the Owner. Staging and storage areas will not be provided by the Owner. Coordination of deliveries and storage will be determined during the pre-construction conference.

##### 2.0.3 OPEN TRENCHES

All open trenches and excavations that could be hazardous to safety within the project site shall be visibly marked or flagged. TRENCHES SHALL NOT REMAIN OPEN AT NIGHT.

##### 2.0.4 SECURITY

The Contractor shall be responsible for the security of his/her equipment and materials, as well as the security of the equipment and materials of his agents prime and sub-contractors. Further, he/she shall be responsible for the security of all gates and entrances to the Project site. The gates shall be locked at all times, or guards posted at the gates to control ingress and egress through them. The Contractor shall provide adequate lighting for the entire area of the Project site should, through no fault of the Owner, night time operations be necessary.

The Contractor shall provide to Owner a list of all his/her employees as well as a list of all the employees of the prime and sub-contractors and shall, during the work of the Project, advise the Owner of changes to the list of personnel working on the Project. The Contractor shall be responsible for the direct supervision of his/her employees, those of his agents, prime and sub-contractors at all times while on the Project site.

The Contractor shall exercise and take all precautions in the storage and dispensing of all flammable liquids such as, but not limited to, gasoline, diesel fuel and lubricants.

### **3.0 SURFACE INFORMATION AND MATERIALS INSPECTION**

The Contractor shall have full responsibility for acquisition, interpretation, analysis and cost impact of sub-surface conditions in the performance of the Work required by this contract. The Contractor shall provide, to the Owner, written certification that all materials and equipment meet the design requirements, established in the drawings and specifications and submitted for permitting. Copies of all test, inspection and certification reports shall be submitted to the Owner within twenty-four (24) hours of receipt of such reports by the Contractor.

### **4.0 PAVEMENT**

The Contractor shall be responsible for all roadways (asphalt and/or concrete) adjacent to or on the project site over which his agents prime and / or sub-contractors vehicles may travel. The Contractor shall, at his sole cost and expense, repair any damage caused by operation of equipment or hauling of debris on any and all roads off of the project site used to travel on.

### **5.0 PROJECT SIGN**

The Contractor shall provide and erect one (1) Project sign. The specifications, location and information to be included on the sign will be determined by the Owner and provided at the pre-construction meeting.

### **6.0 LANDSCAPING AND TREES**

The contractor shall be responsible for all landscaping and / or trees damaged due to negligence incurred by his / her operations.

### **7.0 OWNER'S CRITERIA**

Georgetown County Standards and Specifications are hereby made a part of these Contract Documents and shall be as binding upon the Contract as though reproduced therein. Additionally, the following construction standards shall apply to the project construction and area as binding upon the Contract as though reproduced therein:

1. State of South Carolina Department of Transportation, Standard Specifications for Highway Construction, 2007, or as amended to date. The following Sections
  - a) Section 201 Clearing and Grubbing
  - b) Section 202 Removal of Structures and Obstructions
  - c) Section 203 Roadway and Drainage Excavation
  - d) Section 204 Structure Excavation

- e) Section 208 Sub-grade
  - f) Section 210 Flowable Fill
  - g) Section 211 Proof Rolling
  - h) Division 300 Bases and Sub-bases
  - i) Section 401 Hot Mixed Asphalt Pavement
  - j) Section 402 Hot Mix Asphalt Intermediate Course
  - k) Section 403 Hot Mix Asphalt Surface Course
  - l) Section 714 Permanent Pipe Culverts
  - m) Section 719 Catch Basins, Drop Inlets, Manholes, Junction Boxes, and Spring Boxes
  - n) Section 720 Concrete Curb, Gutter, Curb and Gutter, Sidewalk, Driveway, and Median
  - o) Section 804 Riprap and Slope Protection
  - p) Section 807 Reset Fence
  - q) Section 810 Seeding
  - r) Section 813 Sodding
  - s) Section 815 Erosion Control
2. State of South Carolina Department of Transportation, A Policy for Accommodating Utilities on Highway Rights-Of-Way, August 2005, or as amended to date.
  3. Supplemental Specifications: State of South Carolina Department of Transportation, Standard Specifications for Highway Construction, as amended to date, and including, not limited to, the following: (Listed by Date Issued and Title)
    - a) 91-10-15 Geo-textile for Drainage Filtration
    - b) 92-03-16 Geo-textile for Separation of Sub-grade and Sub-base or Base Course Materials
    - c) 07-02-08 Seeding and Erosion Control Measure
  4. ASTM D2321, "Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications", latest addition.

The Contractor shall immediately notify the Engineer and Owner in writing of any discrepancies between the above referenced standards and other parts of the Contract Documents, and shall proceed with all portions of the work affected by such discrepancies as directed by the Engineer and Owner. Should conflicts arise between standard specifications of government agencies mentioned herein and Contract Documents, Contract Documents shall govern.

**PART 2- PRODUCTS**

Not Used

**PART 3- EXECUTION**

Not Used

**END OF SECTION 00800**

**SECTION 00900**

**LIST OF DRAWINGS AND TECHNICAL SPECIFICATIONS  
HAGLEY WEST DRAINAGE IMPROVEMENTS PHASE 2  
GEORGETOWN, SOUTH CAROLINA**

**I – LIST OF DRAWINGS**

<u>SHEET TITLE</u>	<u>SHEET NO.</u>
COVER SHEET	C1
STANDARD NOTES	C2
OVERALL SITE LAYOUT & SHEET INDEX	C3
EXISTING CONDITIONS & DEMOLITION PLAN	C4-C13
EROSION CONTROL, GRADING, UTILITIES, & DRAINAGE IMPROVEMENTS PLAN	C14-C23
STORM DRAINAGE PROFILES	C24-C25
ROAD CROSS SECTIONS	C26
DRAINAGE & EROSION CONTROL DETAILS	C27-C30
UTILITY, ROADWAY & TRAFFIC CONTROL DETAILS	C31-C32
ROADWAY AND TRAFFIC CONTROL DETAILS	C33-34

[ALL STANDARD DRAWINGS SHOULD BE PLOTTED TO 24x36 TO MAINTAIN SCALE]

**ATTACHMENTS:**

PERMITS

APPENDIX “A”

**II - LIST OF TECHNICAL SPECIFICATIONS**

<u>SECTION NO.</u>	<u>TITLE</u>
02000	Site Clearing
02050	Selective Demolition
02100	Erosion and Sediment Control
02105	General Excavation, Filling and Backfilling
02110	Flowable Fill
02300	Trenching
02335	Sub-grade
02340	Base Course
02345	Proof Rolling
02400	Hot Mix Asphalt Pavement
02450	Roadway Pavement Markings
02460	Thermoplastic Pavement Markings
02500	Storm Drainage System
02525	Precast Concrete Box Culverts
02550	Precast Drainage Structures
02560	Cast-in-Place Concrete
02600	Water Utility
02700	Sanitary Sewer Utility
02740	Riprap and Slope Protection

**END OF SECTION 00900****SECTION 01100****SUMMARY OF WORK****PART 1-GENERAL**

The Summary of Work in this Section comprises the Hagley West Drainage Improvements Phase 2, Georgetown, Georgetown County, South Carolina. The following scope of work description is intended to be general in nature. The intention is to have the successful Contractor perform all of the work included and presented within the Construction Contract Documents, paying particular attention to the Summary Schedule, Key Milestones in Division 0, Section 00750. The Contractor shall comply with and be responsible for all of the requirements of the Project Manual including the Drawings and Specifications.

**1.01 RELATED REQUIREMENTS INCLUDED**

- A. Project Manual, Division 0, Bidding and Contract Documents
- B. Project Manual, Division 1, General Requirements
- C. The Contractor shall comply with and be responsible for all of the requirements of the Project Manual, without exception.
- D. The Contract Form for this Project shall be as stipulated in Division 0, Section 00500 in the Project Manual.

**1.02 SCOPE OF WORK**

- A. Base Bid includes all components of the Project that pertain to site work to entail the civil and landscape portions of the Hagley West Drainage Improvement Phase 2 plans. The project is intended to start in August 2018. The major components of the Base Bid include:

Clearing and grubbing, Storm drain system installation, utilities, Grading, Paving, and Landscaping.

**1.03 SUBSTANTIAL COMPLETION**

Substantial completion is the time at which the Work has progressed to the point where, in the opinion of the Owner and the Engineer, the Work is sufficiently complete in accordance with the Contract Documents so that the facilities can be utilized for the purposes for which they are intended. For this project, Substantial Completion includes all components of the Work of the Project that provides immediate service to the new facility, which has been inspected by the Engineer and determined to be functioning properly. This requires the contractor to achieve completion of all Work of the Project less the paving and / or repair of driveways.

**1.04 FINAL COMPLETION**

Final completion is the time, as certified by the Engineer and accepted by the Owner, when all Work of the Project is complete, post completion documents have been submitted by the contractor and are satisfactory, and the Project is ready for final payment. Final completion requires the contractor to be at the level of functionality defined complete with all "punch list" items addressed to be complete in all respects as contained within the Construction Contract Documents. The date of final completion shall constitute the date of the beginning of the Guarantee and Warranty period.

## 1.05 USE OF THE PREMISES

- A. Contractor shall have use of the area encompassing the Project Site as shown on the applicable drawings for execution of the Work of this Contract, except as may be otherwise indicated or necessitated by the requirements of the Project Manual, or as may be determined by the Owner.
- B. Contractor shall provide, or cause to be provided, and shall pay for all geo-technical services, testing, labor, equipment, materials and such other utilities, transportation and facilities necessary for the proper execution of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Work.
- C. Contractor shall provide protection at all affected areas of the site during the performance of the Work.
- D. Contractor shall perform all work in conformance with O.S.H.A. requirements, which will be strictly enforced.
- E. Contractor shall coordinate the use of the premises consistent with the Project requirements as may be directed by the Owner.
- F. Contractor shall use access routes for delivery of materials and equipment only as indicated on the drawings approved by the Owner and as may be directed by the Owner. Do not use access routes other than those indicated. Contractor shall keep clean, maintain and repair all access routes used.
- G. Contractor shall assume full responsibility for the protection and safekeeping of all products under this contract, stored and / or installed on the Project Site as well as those products stored off the Project Site. Materials, products and equipment shall be stored on the Project Site only in those areas indicated or allowed for staging and approved by the Owner.
- H. Safe staging and material storage shall be limited to the area indicated on the drawings, which have been approved by the Owner and as may be designated by the Owner. Contractor must obtain specific permission from the Owner for the use of other areas for storage and staging.
- I. Contractor shall protect existing sidewalks, pavement, curbs, utilities, building exterior and interior surfaces subject to damage by Work performed under this contract. Contractor shall, at his sole cost and expense, repair or replace any existing work damaged by his/her prime and/or sub-contractor's personnel or equipment.

## 1.06 WORK SEQUENCE AND COMPLETION

- A. Contractor shall work in an orderly manner coordinated with the work of other disciplines and trades.
- B. No disruption to, or use of adjacent facilities and access to those facilities will be allowed.
- C. The Owner may require certain work to be performed after normal working hours or on holidays or weekends or as may be necessitated in the Public interest. Such work does not constitute a change of scope or additional cost.
- D. Contractor shall perform the Work in conformance with the Summary Schedule and Key Milestones in Section 00750. This Section includes critical interim completion dates that the Contractor is required to meet.

## 1.07 LIQUIDATED DAMAGES

The Contractor agrees to commence Work under this Contract on the effective date established as "Notice to Proceed", and to complete the Work in conformance with the established Summary Schedule and Key Milestones in Section 00750 of the Project Manual. Should the Contractor

neglect, fail or refuse to complete the Work by any one of the key milestone activities by its critical interim completion date(s) or the established Completion date then the Contractor shall pay to the Owner Liquidated Damages in the amount of five hundred dollars (\$500.00) for those damages suffered by the Owner as a result of delay for each and every calendar day that the Contractor has failed to complete any key milestone activity by its interim completion date or the established Completion date. The aforementioned Liquidated Damages are not a penalty, but rather are a pre-agreed liquidation of the losses incurred by the Owner due to failure of the Contractor to complete the Work on time.

#### 1.08 SUBSTITUTIONS AND PRODUCT OPTIONS

Written requests for substitutions shall be forwarded to the Engineer for review and Owner approval.

#### 1.09 SURVEY

Contractor shall verify all survey data, geo-technical reports and investigations included within the Contract Documents and report any errors and inconsistencies in writing to the Owner before any work is performed in those areas where errors and inconsistencies may exist. Refer to Division 1, Section 01310, Project Management and Coordination in the Project Manual.

### **PART 2- PRODUCTS**

Not Used

### **PART 3- EXECUTION**

Not Used

**END OF SECTION 01100**

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## SECTION 01290

### PAYMENT PROCEDURES

#### PART 1 - GENERAL

##### 1.1 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents of the Project Manual.
- B. Division 1, General Requirements of the Project Manual

##### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Application and Certificate for Payment.
- B. This Section requires the coordination of the Contractor's Applications for Payment with the approved Construction Schedule, including established Key-Milestone Dates, Schedule of Values, Submittal Schedule, completion date, Prime and Sub-Contractors work and release of liens.

##### 1.3 APPLICATION FOR PAYMENT

###### A. General

1. Progress payments shall be applied for and made as the construction of the Work proceeds at intervals stated in the Contract. The Contractor will provide, to the Owner a "draft" copy of his/her Application for Payment on the 25<sup>th</sup> day of the month, or the closest workday should the 25<sup>th</sup> day fall on a weekend or holiday. This provides an opportunity to discuss figures (Schedule of Values) before they become "fixed", and will expedite the processing of the final typed Application when the Owner receives it.
2. Formal Applications for Payment shall be submitted to the Owner by close of business on the 1<sup>st</sup> day of the succeeding month, or the closest work day should the 1<sup>st</sup> day fall on a weekend or holiday of the month. The Application and Certificate for Payment will be processed, by the Owner, thirty (30) calendar days from the day that the Contractor submits the final Application and Certificate for Payment, except if that day should fall on a weekend or holiday in which case payment shall be made on the next succeeding work day.
3. All information required on the Application for Payment shall be provided and filled in, including that for Change Orders executed prior to the date of submittal of the Application. Summary of dollar values must agree with respective totals indicated on continuation sheets.
4. Each Application for Payment shall be consistent with previous Applications as approved by and paid for by the Owner.
5. All Work covered by Progress Payments shall, at the time of payment, become the property of the Owner.
6. Form of Application for Payment will be AIA Document G 702 revised, and Continuation Sheets G 703.

7. All formal Applications for Payment shall be submitted in duplicate to the Owner by means ensuring receipt within twenty-four (24) hours. Itemized Applications and supporting documents shall be submitted with a complete transmittal form listing attachments, and recording appropriate information related to the Application in a manner acceptable to the Owner. Itemized data and format provided on continuation sheets shall include schedules, line items, values as stipulated in the Schedule of Values as accepted by the Owner.
8. With each Application for Payment the Contractor shall certify that such Application for Payment represents a just estimate of costs reimbursable to Contractor under terms of the Contract and shall certify there are no Mechanic's or Materialmen's Liens outstanding at the date of that Application for Payment, that all due and payable bills with respect to the Work have been paid to date or shall be paid from the proceeds of that Application for Payment, that there is no known basis for the filing of any Mechanic's or Materialmen's Lien against the Surety in connection with the Work, that Waivers and Bills Paid Affidavit forms from all prime and subcontractors, consultants and materialmen have been, or will be, obtained in the form agreeable to the Owner and that amount of the contract remaining to be expended is sufficient to complete the project.
9. The Contractor shall complete each entry on the forms, including notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. Incomplete Applications and Certificate for Payment will be returned without action.
10. Conditions governing regular schedule for applications, payment and ten percent (10%) retainage shall be as stated in the Contract.
11. Continuation sheets shall include a total list of all scheduled component items of work with item number and scheduled dollar value for each item. Dollar values to be included in each column for each scheduled line item when Work has been performed or products stored. Round off values to nearest dollar or as may be specified for Schedule of Values.
12. List each Change Order executed prior to date of submission at end of continuation sheets. List by Change Order number and description as to original component item of Work.

B. Waivers and Mechanics Liens

1. Monthly Applications for Payment shall include Waivers of Mechanic's Liens and Claims for all Work included in the period of construction covered by the Application for Payment and the previous month's Application. Waivers of Liens and Claims from prime contractors or subcontractors and suppliers shall include the period of construction covered by the Application for Payment, the total amount paid prior to and including the previous month's Application for Payment.
2. Partial Waivers of Liens shall be submitted on each item of work for the amount requested, prior to deduction for retainage, for each item.
3. Contractor shall submit final or full Waivers of Liens and Claims for completed items of work shown on the monthly Application for Payment.
4. The Owner reserves the right to designate which entities involved in the Work must submit Waivers of Liens.

5. The Contractor's final Application for Payment shall be submitted with, or preceded by final Waivers from every entity involved with the performance of work, supplying of materials or the providing of professional services covered by the Application who could lawfully be entitled to a Lien.
6. Waivers of Liens shall be provided on forms, and executed in a manner acceptable to the Owner.

#### C. Initial (First) Monthly Application for Payment

1. Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include, but are not limited to the following:
  - a. List of all prime contractors, first and second tier subcontractors.
  - b. Contractor's Sworn Statement of principal suppliers, fabricators, prime and subcontractors.
  - c. Schedule of Values.
  - d. Contractor's construction schedule, to be updated monthly.
  - e. Initial progress report.
  - f. Certificates of Insurance and insurance policies.
  - g. Any material stored off site must carry additional insurance (All Risk Rider) stating Owner as insured. All material will be inspected by the Owner before billing can be approved. Bill of Sale and receipts for items being billed at cost only are required and 25% retainage will be held for off-site stored materials. Paperwork must accompany request two weeks prior to billing to insure adequate time to schedule Owner's inspection.
  - h. Contractor's Construction Safety Plan (Initial Only).

#### D. Application for Payment at Substantial Completion

1. The Contractor shall, upon issuance of the Certificate of Substantial Completion, submit his/her Application for payment, which shall reflect any Certificates of Substantial Completion issued previously for Owner occupancy for designated portions of the Work.
2. Application shall include, but not be limited to and as may be determined by the Owner, the following:
  - a. Certificates of Occupancy and such other permits and approvals as may be required.
  - b. Warranties (Guarantees) and maintenance agreements as may be applicable.
  - c. Changeover information related to Owner's occupancy, use, operation and maintenance.
  - d. Final cleaning of paved areas.
  - e. Application for Reduction of Retainage, and Consent of Surety.
  - f. List of incomplete Work, recognized as exceptions to issuance of Certificate of Substantial Completion

#### E. Final Application for Payment

1. Administrative actions and submittals that shall precede or coincide with this final Application for Payment shall include, but not be limited to and as may be determined by the Owner, the following:

- a. Completion of Project Closeout requirements.
- b. Completion of items specified for completion after Substantial Completion.
- c. Prepare and submit to the Owner a list of unsettled claims, as may be applicable.
- d. Transmit to the Owner all required project records including permit drawings, as constructed drawings both on hard copy and in electronic format.
- e. Provide to the Owner evidence that all requisite taxes, fees and similar obligations have been paid in full.
- f. Removal of all temporary facilities and services.
- g. Removal of all surplus materials, rubbish and similar elements.

**PART 2 - PRODUCTS**

Not Used

**PART 3 – EXECUTION**

Not Used

**END OF SECTION 01290**

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## SECTION 01300

### REGULATORY REQUIREMENTS

#### PART 1 – GENERAL

##### 1.01 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents of the Project Manual
- B. Division 1, General Requirements of the Project Manual

##### 1.02 CODES, AUTHORITIES, REGULATORY AGENCIES, AND INDUSTRY REFERENCES

- A. Where references are made on the Drawings or in the Technical Specifications to codes, they shall be considered an integral part of the Construction Contract Documents as minimum standards. Nothing contained in the Construction Contract Documents shall be so construed as to be in conflict with any law, bylaw, ordinance or regulation of the municipal, state, federal or other authorities having jurisdiction. The Contractor shall reflect reference to specific codes, as may be applicable, insuring conformance with code requirements.
- B. Perform Work in compliance with the following code:
  - 1. Current edition of all applicable building code(s), local, state and federal.
  - 2. International Building Code - 2006
- C. Perform Work in compliance with the following Authorities and Regulatory Agencies:
  - 1. Georgetown County, South Carolina
  - 2. South Carolina Dept. of Transportation (SCDOT)
  - 3. South Carolina Department of Health Environmental Controls (SCDHEC / OCRM)
  - 4. OSHA Code of Federal Regulations. (OSHA)
  - 5. All federal, state and local clean air, clean water, water rights, resource recovery, and solid waste disposal standards and the Federal Endangered Species Act, and the Occupational Safety and Health Acts.
  - 6. Environmental Protection Agency (EPA).

##### 1.04 PERMITTING

- A. At no additional expense to the Owner, the Contractor shall file for and obtain necessary licenses and permits for any interim phases for construction, and be responsible for complying with any federal, state, county, and municipal laws, codes, regulations and ordinances applicable to the performance of the Work, including, but not limited to, any laws or regulations requiring the use of licensed prime and /or subcontractors to perform parts of the Work.

##### 1.05 INSPECTION AND CERTIFICATIONS

- A. Arrange inspection and obtain Certificates of approval from applicable authorities having jurisdiction. Furnish Certificates of Approval in accordance with the applicable Technical Specifications and the General Requirements of the Contract.

- B. Notify and coordinate for all appropriate county and state inspections of the work. Allow enough time to maintain progress of the work.

1.06 PERFORMANCE

- A. Should the Contractor knowingly perform any Work that does not conform with the requirements of applicable codes, ordinances, regulations, or standards, without having given prior written notice to the Owner and obtaining required variance, etc. from the governing body, Contractor shall assume full responsibility thereof and shall bear all costs involved in correcting such non-complying Work. Costs shall include but not be limited to: All fines, inspection costs, damages, design and management fees in addition to the cost of removal and replacement of the work of all trades involved.

**PART 2 – PRODUCTS**

Not Used.

**PART 3 – EXECUTION**

Not Used.

**END OF SECTION 01300**

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## SECTION 01310

### PROJECT MANAGEMENT AND COORDINATION

#### PART 1 – GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall comply with and be responsible for all of the requirements of the Project Manual and the Construction Contract Documents, without exception
- B. Contractor shall be responsible for general project coordination of all construction phases and aspects, trades and disciplines of the Work of the Project.
- C. Contractor shall be responsible for general coordination of all construction site operations and with other improvement projects that may be conducted by the Owner.
- D. Contractor shall be responsible for general coordination with other interested parties including, but not limited to, SCDOT, SCDHEC, Santee Cooper, Georgetown County Water & Sewer District, Owner other Contractors working on abutter property projects, and all involved permitting authorities.

##### 1.02 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents in the Project Manual.
- B. Division 1, General Requirements in the Project Manual

##### 1.03 GENERAL COORDINATION

- A. Coordinate scheduling, submittals, and work of various Sections of the Technical Specifications to assure efficient and orderly sequence of installation of construction elements with provisions for accommodating any items furnished by the Owner, or others, to be installed by the Contractor.
- B. Coordinate sequence of Work to accommodate partial occupancy for the Owner as specified in Section 01100, Summary of Work and / or as directed by the Owner.
- C. Review and coordinate requirements of all Divisions of the Project Manual and Sections of the Technical Specifications. Report any discrepancies to the Owner
- D. Maintain services of prime and major sub-contractors throughout duration of the Contract, except as may be required by provisions of Conditions of Contract. Notify the Owner, in writing, of intention to replace prime or sub-contractor(s), outlying reasons for the action and naming proposed replacement contractor(s).
- E. Coordinate work of prime and sub-contractors and record contractor installation(s) data on Project Record (As Constructed) Drawings.
- F. All communications regarding Contract requirements shall be addressed to the Owner. Outline any special procedures required for coordination and include such items as required notices, reports and attendance at meetings.

- G. Arbitrate and resolve coordination conflicts between prime and sub-contractors to ensure complete and operational systems.
- H. Coordinate work with all existing utility systems.
- I. Coordinate construction activities to ensure that operations are carried out with due consideration given to energy, water and materials.
- J. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work. Salvage material shall include marketable deciduous and coniferous timber to be cut and removed by the Contractor on the project site.

#### 1.04 COORDINATION MEETINGS

- A. In addition to the meetings referred to in Section 01315, Progress Meetings, the Contractor shall conduct coordination meetings and pre-installation meetings with supervisory personnel, prime and sub-contractors, suppliers, the Owner and others as necessary and applicable, to assure coordination of different trades and disciplines
- B. Schedule coordination and pre-installation meetings with prime and sub-contractors, suppliers and the Owner to discuss hardware installation and specialty systems installation.

#### 1.05 COORDINATION OF SUBMITTALS

- A. Coordinate use of Project space and sequence of installation of equipment, walks, parking areas, mechanical, electrical, plumbing, or other Work that is indicated diagrammatically on the Contract drawings and/or contained in the Technical Specifications. Utilize space efficiently to maximize accessibility for Owner installations, maintenance and repairs.
- B. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in sequence required to obtain best results.
- C. Make adequate provisions to accommodate items scheduled for later installation, including accepted Bid Alternates, Owner supplied items, sub-subcontractor installed items, work by others, and installation of products purchased with allowances.

### **PART 2 – PRODUCTS**

**Not Used**

### **PART 3 – EXECUTION**

**Not Used.**

**END OF SECTION 01310**

## **SECTION 01315**

### **PROGRESS MEETINGS**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Division 0, Bidding and Contract Documents, and.
- B. Division 1, General Requirements of the Contract Documents apply to this Section.

##### **1.2 SUMMARY**

- A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:
  - 1. Construction Progress Meetings.

##### **1.3 PROGRESS MEETINGS**

- A. Conduct construction progress meetings at the Project site at regularly scheduled intervals. Notify the Owner of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.
- B. Agenda: Review and correct or approve minutes of the previous Construction progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate in the current status of the Project.
  - 1. Contractor's construction schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's schedule, whether on time or ahead or behind schedule. Determine how schedule can be improved if behind.
- C. Reporting: After each progress meeting date, the Contractor will distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
  - 1. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

#### **PART 2 - PRODUCTS (Not Applicable)**

#### **PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01315**

**SECTION 01320  
RAIN DELAYS**

**Rain Day:** For rain delays, the Contractor shall be entitled to a one day extension of time for each day in any given month that the actual rain days measured at Georgetown, South Carolina (NOAA Station 383470), or an otherwise mutually agreed upon location, exceed the NOAA average monthly rainfall for the month (rounded to the day). In order to qualify as a rain day, there must be at least one-hundredth of an inch precipitation on the date in question. The average number of days (rounded to the full day) in each month receiving one-hundredth of an inch or more of rain in Georgetown, South Carolina, according to NOAA are as follows:

<u>Month</u>	<u>Days</u>
January	10
February	8
March	9
April	7
May	8
June	10

<u>Month</u>	<u>Days</u>
July	11
August	12
September	10
October	6
November	8
December	9

The rain gauge (NOAA 383470), or an otherwise mutually agreed upon location, shall be used as the determinate for daily rain measurement. The Contractor shall submit any request for rain days by the tenth day of the following month. Rain and weather delay extensions of time are non-compensable delays and the Contractor shall be entitled to no additional compensation as consequence of rain and weather related extensions hereunder.

**PART 2 – PRODUCTS**

Not Used

**PART 3 – EXECUTION**

Not Used

**END OF SECTION 1320**

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## SECTION 01331

### SCHEDULE OF VALUES

#### PART 1 – GENERAL

##### 1.01 RELATED REQUIREMENTS

- A. Contractor shall submit to the Owner a Schedule of Values with line items allocated to various portions of the Work with their response (Bid) to the RFP.
- B. Provide Owner, upon request, with support values including data substantiating their correctness.
- C. Division 0, Bidding and Contract Documents and
- D. Division 1, General Requirements apply to this Section.

##### 1.02 FORM AND CONTENT

- A. The Schedule of Values shall be tabulated to correspond with the Contractor's Application and Certificate for Payment form. The Schedule of Values shall be identified with:
  - 1. Title of Project, Bid Number and Location
  - 2. Project Manager for Contractor
  - 3. Name and Address of Contractor
  - 4. Contract Designation
  - 5. Date of Submission
- B. Schedule of Values shall be presented in accordance with the CSI format on a line item basis
- C. Listing of Component Items:
  - 1. Identify each line item with the number and title of the respective major section of the Technical Specifications.
  - 2. Provide breakdown of Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and Progress Reports. Break principal subcontract amounts down into several line items by completed task in various locations.
  - 3. Round off amounts to nearest whole dollar, total of all listed values shall equal total Contract Sum.
  - 4. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on Schedule of Values for initial cost of materials, for each subsequent state of completion, and for total installed value of that part of the Work.
  - 5. Costs of actual work-in-place may be shown as separate line items in Schedule of Values.
    - a. Bonds
    - b. Insurance
    - c. Temporary facilities, services and controls.
    - d. Field supervision and layout
    - e. Testing
    - f. Allowances
  - 6. Separate material cost and labor cost as may be directed or requested by the Owner
- D. For each major line item whose value is larger than five thousand dollars (\$5,000.00) list sub-values of major products or operations under the item.

E. For various portions of the Work:

1. Each item shall include a directly proportional amount of overhead and profit.
2. For items on which progress payments will be requested for stored materials, break down the value into:
  - a. Cost of materials, delivered and unloaded, with taxes paid.
  - b. Total installed value.

F. The sum of all values listed in the Schedule of Values shall equal the total Contract Sum.

#### 1.03 SUB-SCHEDULE OF UNIT MATERIAL VALUES

A. Not Included (NIC)

#### 1.04 RESUBMITTAL

- A. After review by the Owner, Contractor may be requested to revise and resubmit Schedule as necessary.
- B. Revised and approved Schedule shall be resubmitted as part of monthly Application for Payment.

#### 1.05 MATERIALS STORED OFF - SITE

- A. Payment for materials and equipment stored off – site, and not on the property of Georgetown County shall be subject to, and comply with the following:
  1. Prior written approval from the Owner, of materials and equipment to be stored, and location of facilities to be used for storage.
  2. Storage of materials and equipment will be in a bonded warehouse. Proof of insurance shall be provided to the Owner in the name of Georgetown County.
  3. Contractor shall furnish an inventory, including invoices, for all stored materials and equipment that are included in the Application for Payment using a form acceptable to and approved by the Owner.
  4. Contractor shall issue a Bill of Sale to the Owner for all items.

### **PART 2 - PRODUCTS**

Not Used

### **PART 3 – EXECUTION**

Not Used

**END OF SECTION 01331**

## SECTION 01410

### TESTING LABORATORY SERVICES

#### PART 1 – GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Unless required by a Section of the Technical Specifications, the Owner shall employ and pay for the services of an Independent Testing Laboratory to perform specified testing of work and materials at the Project Site or at point of manufacture.
  - 1. Contractor shall cooperate with the testing laboratory to facilitate the execution of its required services.
  - 2. Contractor shall incorporate recommendations from Owner's testing results. Obtain testing prior to Owner's testing as necessary. Owner's testing shall not be a substitute for contractor's own Quality Control measures but, rather, a measure of Quality Assurance (QA).
- B. The Contractor shall comply with and be responsible for all of the requirements of the Project Manual, without exception.

##### 1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Inspections and testing required by laws, ordinances, rules, regulations, orders, or approvals of public authorities.
- B. Each specification section listed: Inspection and laboratory testing required, and standards for testing.
- C. Division 1, General Requirements of the Project Manual.

##### 1.03 QUALIFICATIONS OF LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification," published by American Council of Independent Laboratories.
- B. Comply with the following requirements:
  - 1. ANSI/ASTM D3740: Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
  - 2. ANSI/ASTM E329: Standard Recommended Practice for Inspection and Testing for Concrete, Steel, and Bituminous Materials as Used in Construction.
- C. Authorized to operate in the State of South Carolina
- D. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during the most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

- E. Testing Equipment:
  - 1. Calibrated at reasonable intervals by devices of accuracy traceable to either:
    - a. National Bureau of Standards.
    - b. Accepted values of natural physical constants.
- F. Employment of testing laboratory shall in no way relieve Contractor of obligation to perform Work in accordance with requirements of Construction Contract Documents.
- G. Failure on part of Owner to make any tests of materials shall in no way relieve the Contractor of responsibility of furnishing materials or performing work conforming to the Construction Contract Documents.

#### 1.04 LABORATORY DUTIES

- A. Cooperate with the Owner and Contractor; provide qualified personnel after due notice from Contractor.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
  - 1. Comply with specified standards.
  - 2. Ascertain compliance of materials with requirements of Contract Documents.
- C. Promptly notify Owner and Contractor of observed irregularities or deficiencies of work or products.
- D. Promptly submit written report of each test and inspection: one (1) copy each to Owner and Contractor. Each report shall include:
  - 1. Date issued.
  - 2. Project title and Bid Number
  - 3. Testing laboratory name, address and telephone number.
  - 4. Name and signature of laboratory inspector.
  - 5. Date and time of sampling or inspection.
  - 6. Record of temperature and weather conditions.
  - 7. Date of test.
  - 8. Identification of product.
  - 9. Location of sample or test in the Project.
  - 10. Type of inspection or test.
  - 11. Results of tests and compliance with Contract Documents.
  - 12. Interpretation of test results, when requested by Owner
- E. Perform additional tests as may be required by the Owner.

## 1.05 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
  - 1. Release, revoke, alter or enlarge on requirements of Contract Documents.
  - 2. Approve or accept any portion of the Work.
  - 3. Perform any duties of the Contractor.
  - 4. Stop the Work.

## 1.06 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate, together with laboratory personnel, will provide access to the point/location of the Work, and to manufacturer's operations.
- B. Secure and deliver to laboratory at designated location(s) adequate quantities of representational material proposed to be used and which require testing together with applicable proposed design mixes.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes which required control by the testing laboratory.
- D. Furnish copies of Products test reports to the Owner as required.
- E. Furnish incidental labor and facilities:
  - 1. To provide access to Work to be tested.
  - 2. To obtain and handle samples at the Project Site or at the source of the product to be tested.
  - 3. To facilitate inspections and tests.
  - 4. For storage and curing of test samples.
- F. Notify laboratory twelve (12) hours in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
  - 1. When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred due to Contractor's negligence on inability to perform the Work at the scheduled time.
- G. Make arrangements with laboratory and pay for services to perform inspections, sampling and testing required:
  - 1. For the Contractor's convenience.
  - 2. When the initial tests or inspections indicate Work does not comply with Contract Documents (i.e., re-tests).

## 1.07 SOURCE OF MATERIALS

- A. Source of supply of each of materials required shall be acceptable to the Owner and before delivery is started.
- B. Representative samples shall be submitted for inspection or tests.

- C. Results obtained from testing samples will be used for preliminary approval, but will not be used as final acceptance of materials.
- D. The Owner may test materials proposed to be used at any time during preparation and use.
- E. If it is found that sources of supply, which have been approved, do not furnish product of uniform quality, or if product from any source proves unacceptable at any time, Contractor shall furnish approved material from another source without additional cost to Owner or delay in completion date.

#### 1.08 IDENTIFICATION

- A. Required samples submitted by Contractor shall be properly labeled for identification.
- B. Materials and/or equipment that have been inspected and/or tested shall be stored in a controlled area with suitable identification referencing tests and certifications.
- C. Continuous inventory shall be kept of all items in this area controlled by log in and log out with receiving and disbursing signatures.
- D. Copies of receiving or disbursing actions shall be sent to the Owner on a daily basis.
- E. Disbursing records shall show final destination and installation.

#### 1.09 MATERIAL STORAGE

- A. Materials shall be stored so as to ensure preservation of their quality and fitness for Work, in accordance with requirements of Section 01620, Storage and Protection.

#### 1.10 SCHEDULE OF INSPECTIONS AND TESTS

- A. Refer to each individual Section of the Project Manual for specific testing requirements, or as otherwise required by the Contract Documents or appropriate regulatory agency.

### **PART 2 – PRODUCTS**

Not Used.

### **PART 3 – EXECUTION**

Not Used.

**END OF SECTION 01410**

## SECTION 01510

### TEMPORARY CONSTRUCTION CONTROLS

#### PART 1- GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall comply with and be responsible for all of the requirements of the Project Manual, without exception.
- B. Furnish, install and maintain temporary controls required for construction.
- C. Remove at completion of Work.

##### 1.02 RELATED REQUIREMENTS

- A. Division 1, General Requirements of the Project Manual.

##### 1.03 CONSTRUCTION SITE CLEANING

- A. Maintain areas within limits of the Project Work Site free of extraneous debris and litter.
- B. Initiate and maintain specific program to prevent accumulation of debris at construction site, storage and parking areas, or along access roads and off site hauls routes.
  - 1. Furnish on-site containers for collection of waste materials, debris and rubbish.
  - 2. Prohibit overloading of trucks to prevent spillage on access and haul routes.
  - 3. Provide periodic inspection of traffic areas to enforce requirements.
  - 4. Remove waste material, debris and rubbish from site and building area daily, or sooner as otherwise needed.
  - 5. Do not drop or throw materials from heights. Lower waste material in a controlled manner and with as few handlings as possible.
  - 6. During entire construction period, and at all times, keep the site access entry road, parking areas free from accumulation of waste materials, debris and rubbish caused by the Work of this Project.
  - 7. Dirt and debris shall be removed from all surfaces prior to closure of all areas (walls, ceilings, chases, etc.).
- C. Hazards Control:
  - 1. Store volatile wastes in covered metal containers.
  - 2. Remove containers from premises daily.
  - 3. Prevent accumulation of wastes, which create hazardous conditions.
  - 4. Provide adequate ventilation during use of volatile or noxious substances.
- D. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws:
  - 1. Do not burn or bury rubbish and waste materials on project site.
  - 2. Do not dispose of wastes into streams or waterways.

3. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.

#### 1.04 DUST CONTROL

- A. Provide positive methods and apply dust control materials to minimize raising dust from construction operations and provide positive means to prevent air-borne dust from dispersing into atmosphere.
- B. Clean interior building areas to prevent accumulation of dirt and debris and execute prior to start of finish painting, special coatings, and/or other finish material installations.
- C. Wet down materials and rubbish to prevent blowing dust.
- D. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.
- E. Continue cleaning on an as-needed basis until building and/or site is ready for beneficial occupancy.

#### 1.05 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction and earthwork by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation. Wetland areas shall be protected as well. All work to be coordinated with and in conformance to applicable SCDHEC / OCRM requirements.
  1. Hold areas of bare soil exposed at one time to minimum.
  2. Provide temporary control measures such as berms, dikes, and drains.
  3. Comply with federal, state and local regulations.
- B. Construct fills and soil waste areas by selective placement to eliminate surface soils or clay, which will erode.
- C. Periodically inspect earthwork to detect any evidence of start of erosion, apply corrective measures as required by erosion control.

#### 1.06 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by discharge of noxious substances from construction operations.
- B. Contractor is responsible only for pollution control of the immediate Work of Contract, the actions and operations of the Contractor, and the workers employed or contracted to Contractor. Provide equipment and personnel to perform emergency measures required to contain spillage, and to remove contaminated soil or liquids.
- C. Take special measures to prevent harmful substances from entering public waters. Prevent disposal of wastes, effluents, chemicals or other such substances adjacent to basins, or in sanitary or storm sewers.
- D. Provide systems for control of atmospheric pollutants. Prevent toxic concentrations of chemicals. Prevent harmful disposal of pollutants into atmosphere.

1.07 WATER CONTROL

- A. Provide methods to control surface water to prevent damage to project site or adjoining properties. Control fill, grading, and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas. Direct drainage to proper runoff.
- B. Provide, operate, and maintain hydraulic equipment of adequate capacity to control surface and water.
- C. Dispose of drainage water in manner to prevent flooding, erosion or other damage to any portion of site or adjoining areas.
- D. Dewater areas in accordance with applicable local and state requirements and accepted professional practice.

1.08 EARTH CONTROL

- A. Contractor shall, at his/her sole cost, remove excess soil, pier spoils, etc., at time of generation.

**PART 2 – PRODUCTS**

Not Used

**PART 3 – EXECUTIONS**

3.01 REMOVAL

- A. Contractor shall, at his/her sole cost, remove temporary construction controls at completion of Work or as required by the SCDHEC / OCRM.

**END OF SECTION 01510**

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## SECTION 01563

### HANDLING OF INCIDENTAL FUEL SPILLAGE DURING CONSTRUCTION

#### PART 1 – GENERAL

##### 1.01 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents in the Project Manual.
- B. Division 1, General Requirements in the Project Manual.
- C. South Carolina Dept. of Health and Environmental Controls (SCDHEC).
- D. South Carolina Dept. of Transportation (SCDOT).

##### 1.02 SCOPE

- A. This section consists of procedures to be followed in handling material contaminated with petroleum fuel products (hydrocarbons including petroleum, petroleum derivatives, hydraulics and like products) caused by incidental spillage (including leaks) from the Contractor's or his/her prime and sub-contractor's equipment.

Incidental spillage shall mean spillage of a quantity not greater than 25 gallons per incident, of vehicular or mechanical equipment fuel products, onto open ground and absorbed or not absorbed by the soils.

Spillage or leakage of petroleum fuel products in quantities in excess of 25 gallons shall be immediately remediated by the Contractor using applicable and appropriate procedure(s). Whenever such spillage or leakage occurs, the Contractor shall immediately implement the appropriate corrective actions as required.

- B. The provisions of this Section are limited to incidental petroleum fuel spillage on ground surfaces and it excludes fuel spillage onto surface waters.

##### 1.03 APPLICABLE CODES

- A. The Contractor shall comply with all prevailing federal, state, and local environmental protection ordinances and codes governing and having application to and any discharges, intentional or accidental, which may cause water pollution and constitute a nuisance, and sanitary nuisance.
- B. Leaks and spillage may occur when using mechanical equipment. Equipment generated or lubricated with petroleum products, are prone to leaks or spillages, therefore proper management of "spillage incidents" is essential.

#### PART 2 – PRODUCTS

##### 2.01 ABSORBENT MATERIALS

Contractor shall equip crews and/or provide machinery with the most efficient type of petroleum absorbent materials. These materials are available at petroleum equipment suppliers and must be

readily accessible so that spillages can be quickly contained and prevented from becoming greater incidents. Fiber material, sand or cat litter may be used as an absorbent material. Sufficient quantity of absorbent material capable of absorbing up to 25 gallons of petroleum fuel products shall be stocked at the job site at all times.

### **PART 3 - EXECUTION**

#### **3.01 PROCEDURES**

- A. Personnel handling waste materials must have a minimum of 40 hours training as defined in 29 CFR 1910.120 and in accordance with the certified OSHA course.
- B. Perform work as specified herein and in accordance with the applicable provisions of South Carolina Dept. of Transportation (SCDOT) and South Carolina Dept. of Health and Environmental Controls (SCDHEC). No payment will be made to the Contractor for the cost of handling and disposing of leaks, spillages and materials contaminated by such leaks or spillages.

The procedure for the proper handling and disposal of contaminated soils and absorbent materials is readily available through the aforementioned agencies:

- C. The steps outlined below are minimum requirements and are merely presented as guidelines. They do not constitute a complete compliance procedure.

##### **STEP 1:**

If a fuel contamination to open ground has been discovered, check for the origin of that leak or spillage. Then stop the spillage or leak and positively contain it, and then use absorbents to collect the discharged liquid. Immediately notify the Owner.

##### **STEP 2:**

Sand may be used to absorb ground surface spills while absorbent materials may be used to absorb ground spills as well as surface water spills. Once absorption of spilled fuels is complete the impacted (contaminated) absorbent materials shall be stored in 55-gallon steel drums (100-150 lbs.). If leaked or spilled fuel has been absorbed into the soils, excavate and containerize the impact (contaminated) soils. Soils may be stored in 55- gallon steel drums.

##### **STEP 3:**

The contaminated materials must be collected, containerized and otherwise properly stored and labeled prior to transport to a pre-approved storage, disposal or treatment facility. All drums used to store impacted (contaminated) absorbent material and/or contaminated soils shall be properly sealed and labeled with the following information.

Name of Company (Contractor)

Contract or Project No.:

Location of origin:

Type of contents:

Type of containment:

Quantity: (e.g. 1 of 1)

Date:

Containerized by:

Labeled by:

**END OF SECTION 01563**

## SECTION 01570

### TRAFFIC REGULATION

#### PART 1 – GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall comply with and be responsible for all of the requirements of the Project Manual, without exception.
- B. Construction parking control, flagmen, flares and lights, haul routes, traffic signs and signals, and removal.
- C. Maintenance of safety and convenience of public.

##### 1.02 RELATED WORK

- A. Division 1, General Requirements of the Project Manual.

##### 1.03 PUBLIC SAFETY AND CONVENIENCE

- A. Materials and equipment shall be stored and Work conducted to minimize obstruction to pedestrian movement and vehicular traffic. Materials and equipment stored in or near path of traffic shall be protected with appropriate warning signs and barricades. At night, or as otherwise required, equipment not in use shall be stored in such manner and location to not interfere with safe passage of pedestrians and vehicles. Contractor shall provide and maintain flagmen at points and for periods of time required to provide safety and convenience of traffic, and as directed by the Owner
- B. Contractor shall not close traffic to any bridge, culvert, or any other portion of public road except as may be designated by the Owner. Prior to closing any access way and/or structure coordinate work schedule with the Owner.
- C. Contractor shall provide the Owner with notice at no less than 48 hours prior to movement of heavy equipment and/or wide or slow moving vehicles to or from Project Site. Contractor shall strictly adhere to vehicular routes established or as may be directed by the Owner.

##### 1.04 LANE CLOSURE RESTRICTIONS

Contractor shall be responsible to verify, with the SCDOT District Traffic Engineer, lane closure restriction hours. There are no restrictions on lane closures during the summer recess period for schools in the area which occurs June 5<sup>th</sup> to August 21<sup>st</sup>, 2018.

Any work on SCDOT roads shall be planned so that closure of intersecting streets, road approaches or other access points is held to a minimum.

##### 1.05 TRAFFIC CONTROLS AND SIGNALS

Traffic controls for utility construction and maintenance operations shall conform with the SCDOT Standard Drawings and Manual on Uniform Traffic Control Devices

(MUTCD). All construction and maintenance operations shall be planned with full regard for safety and to keep traffic interference to an absolute minimum.

The contractor shall : a ) provide, erect and maintain all necessary barricades, lights, danger signals, signs and other control devices, provide qualified, trained and equipped flaggers and watchmen where necessary, as may be directed by the Owner; b) take all necessary precautions for the protection of the Work, the warning that work is under construction and the safety of the public. Suitable advance warning signs shall be erected in advance where operations interfere with the use of the road by traffic. Where a lane, or a portion of a lane is closed, traffic control devices and flaggers shall be used in accordance with the Standard Drawings and MUTCD. All barricades, signs and traffic control devices shall conform to the requirements of the MUTCD.

#### 1.06 HAUL ROUTES

Based on regulations prescribed by the South Carolina Dept. of Transportation (SCDOT) and Georgetown County, or other agency having jurisdiction, use only established roadways or use temporary roadways constructed by the contractor when and as authorized by the Owner.. When materials and/or equipment are being transported in executing the Work vehicles shall not be loaded beyond loading capacity recommended by manufacturer of vehicle or prescribed by federal, state or local law or regulation. When it is necessary to cross curbs or sidewalks contractor shall protect them from damage. Contractor shall repair / replace or pay for all damaged curbs, sidewalks, roads, and / or paving.

#### 1.07 EQUIPMENT STORAGE

When equipment is not in use, on roadways open to public travel, contractor's equipment and vehicles shall be kept at least thirty (30) feet from the edge of the travel lanes, On Interstate routes or Freeways, no vehicles or equipment will be permitted on the shoulders at any time.

#### 1.08 FLARES AND LIGHTS

Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic in landside areas only.

### **PART 2 – PRODUCTS**

#### 2.01 SIGNS, SIGNALS AND DEVICES

- A. Post-mounted and wall-mounted at parking areas to indicate spaces designated for use by construction personnel.
- B. Traffic control signals, as may be required, and as approved by SCDOT and the Owner
- C. Traffic cones and drums and lights, as approved by SCDOT and the Owner.
- D. Flagmen equipment as required by SCDOT and Georgetown County.

## **PART 3 – EXECUTION**

### **3.01 REMOVAL**

- A. Contractor shall remove equipment and devices, at his/her sole cost, when no longer required. Repair damage caused by installation. Remove post settings to depth of three (3) feet.

**END OF SECTION 01570**

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## **SECTION 01580**

### **PROJECT IDENTIFICATION AND SIGNS**

#### **PART 1 – GENERAL**

##### **1.01 REQUIREMENTS INCLUDED**

- A. The Contractor shall comply with and be responsible for all requirements of the Project Manual, without exception.
- B. The Contractor shall comply with applicable requirements in this Section and more specific requirements of Section 00800, Special Project Conditions and Section 01100, Summary of Work.
- C. Furnish, install and maintain Project Identification Signs.
- D. Provide temporary, on site informational signs to identify key elements of the construction facilities.
- E. Remove Project Identification Signs upon completion of the construction Work of this contract.
- F. Allow no other signs to be displayed.
- G. Submit Shop Drawings of the proposed Project Identification Sign within ten (10) calendar days of the Notice to Proceed (NTP).

##### **1.02 RELATED REQUIREMENTS**

- A. Division 1, General Requirements of the Project Manual.

#### **PART 2 – PRODUCTS**

##### **2.01 SIGN MATERIALS**

To Be Determined By The Owner

##### **2.02 TEMPORARY SIGNAGE**

To Be Determined By The Owner

#### **PART 3 – EXECUTION**

##### **3.01 PREPARATION**

The Contractor shall be responsible for the cost of preparing and installing the Sign

##### **3.02 MAINTAINANCE**

The Contractor shall be responsible for the cost of maintaining the Sign.

3.03 REMOVAL

The Contractor shall be responsible for the cost of removing the Sign.

**END OF SECTION 01580**

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## SECTION 01700

### EXECUTION REQUIREMENTS

#### 1.01 REQUIREMENTS INCLUDED

- A. Contractor shall comply with and be responsible for all of the requirements of the Project Manual without exception.
- B. Contractor shall provide field engineering and general layout services required on the project as follows:
  - 1. Civil, structural or other professional engineering services specified, or required to execute construction methods.
  - 2. Survey work required for execution of the total Work of the Project.
  - 3. Continuous horizontal and vertical control regarding layout and execution of Work of the Project.
  - 4. Coordinate field engineering services with the Owner.

#### 1.02 RELATED REQUIREMENTS

- A. Division 1, General Requirements of the Project Manual.
- B. The Drawings and all sections of the Technical Specifications as may be applicable.

#### 1.03 CONTROLS

- A. Contractor will establish primary controls, horizontal and vertical control points at various locations at the Site. These will be described and indicated on the Contractor's as constructed drawings and will be coordinated in the field by the Contractor.
- B. Existing control points and property line markers will be shown on the Construction Contract drawings.

#### 1.04 QUALIFICATIONS OF SURVEYOR OR ENGINEER

- A. For Surveying, a qualified engineer or land surveyor, registered in the State of South Carolina and acceptable to the Owner.
- B. For engineering, a registered professional engineer of a discipline required for this Project licensed in the State of South Carolina and acceptable to the Owner.

#### 1.05 SURVEY REFERENCE POINTS

- A. Existing horizontal and vertical control points for the Project are those designated on the Construction Contract drawings or as determined from investigation of the existing conditions.

- B. Verify property lines, grades, levels and dimensions indicated.
- B. Locate and protect control points prior to starting Site Work and preserve permanent reference points during construction.
  - 1. Make no changes or relocations without prior approval of the Owner
  - 2. Report to the Owner when a reference point is lost, destroyed or requires relocation because of necessary changes in grades or locations.
  - 3. Require surveyor to replace Project control points, which may be lost or destroyed.

#### 1.06 PROJECT LAYOUT REQUIREMENTS

- A. Establish a sufficient number of permanent bench marks on Site, as may be required, referenced to data established by survey control points. Record locations of benchmarks with horizontal and vertical data on Project Record Documents, Section 01781.
- B. From established control points, layout all Work by establishing all lines and grades at Site necessary to control Work, and shall be responsible for all measurements that may be required for execution of Work.
- C. Furnish, at own expense, all such stakes, steel pins, equipment, tools and material and labor that may be required in laying out Work control points.
- D. Establish lines and levels, locate and layout by instrumentation and similar appropriate means:
  - 1. Site Improvements
    - a. Stakes for grading, fill, and topsoil placement.
    - b. Utility slopes and invert elevations.
    - c. Limits of pavement (pervious concrete and asphalt).
  - 2. Batter boards for structures.
  - 3. Building foundation column locations, piling and floor levels.
  - 4. Controlling lines and levels required for mechanical and electrical trades.
- E. Verify and coordinate in field all existing and proposed underground components including civil, structural, utilities and other components prior to initiation of the Work. Advise the Owner of any conflicts or discrepancies.

#### 1.07 SUBMITTALS AND DOCUMENTS

- A. Submit name and address of Surveyor and Professional Engineer to the Owner
- B. On request of the Owner, submit documentation to certify accuracy of field engineering work and compliance with Contract Documents.
- C. Submit certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.
- D. Standards and Availability: Data and other measurements shall be recorded in accordance with standard and approved methods. All field notes, sketches, recordings, and

computation in establishing above horizontal and vertical control points shall be available at all times during progress of Work for ready examination by the Owner

- E. Maintain complete and accurate record data on underground utilities and obstructions, new and existing, encountered in execution of Work. Record data on Project Record Documents in accordance with requirements of Section 01781, Project Record Documents.
- F. On completion of storm water collection system, outfall structures, and other major site improvements, prepare certified survey showing dimensions, locations, angles, and elevations of construction.
- G. Submit, upon request by the Owner, signed and sealed Engineering Calculations.

**PART 2 – PRODUCTS**

Not Used

**PART 3 – EXECUTION**

Not Used

**END OF SECTION 01700**

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## SECTION 01770

### CLOSEOUT PROCEDURES

#### PART 1 – GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall comply with and be responsible for all the requirements of the Project Manual, without exception.
- B. The Contractor shall comply with applicable requirements in this Section and more specific requirements in Division 1, Section 01100, Summary of Work.
- C. Comply with requirements stated in the Contract and in approved Specifications for the Work.

##### 1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Fiscal provisions, legal submittals and additional administrative requirements.
- B. Division 1, General Requirements in the Project Manual.
- C. Closeout submittals required of trades in various sections of the approved Specifications.

##### 1.03 DAMAGES

- A. If the Contractor neglects, fails, or refuses to complete the work by the Substantial Completion Date, Final Completion Date, or any portion of the Work by an Interim Completion Date, subject to any proper extension granted by the Owner, then the Contractor will pay, or cause the Contractor's Surety to pay damages to the Owner as defined in Summary of the Work, Section 01100.

##### 1.04 PHASED COMPLETION

- A. In addition to Substantial Completion and Final Completion as defined below, the Contractor shall complete and make available to the Owner certain portions of the Work set forth on the Summary Schedule and Key Milestones (Interim Completion Dates) in Section 00750 no later than the dates indicated on said Schedule.
- B. The Contractor acknowledges that such Interim Completion Dates are essential to the Owner's plans and therefore time is of the essence in meeting said Interim Completion Dates.

##### 1.05 SUBSTANTIAL COMPLETION

- A. When Contractor considers the Work is substantially complete, he shall submit to the Owner the following:

1. A written certification that the Work, or designated portion thereof, is substantially complete. All items not complete shall be listed and deficient items noted.
  2. Owner will review the Contractor's certification and examine the Work for conformance to the Certification and the Contract Documents.
  3. Owner will inform the Contractor of non-compliance or incomplete items.
  4. Contractor shall remedy the deficiencies in the Work within seventy-two (72) hours, and send a second written notice of substantial completion to the Owner.
  5. The Owner will re-examine the Work.
- B. When the Owner determines that the Work is substantially complete, the Owner will:
1. Prepare a Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected, as verified and amended.
  2. Send to Contractor for his/her written acceptance of the responsibilities assigned to them in the Certificate.
- C. After Work is substantially complete, Contractor shall:
1. Obtain and submit Certificate of Occupancy. Owner shall, in detail, list the status of the area affected by partial acceptance and occupancy to establish the existing conditions prior to such acceptance or occupancy.
  2. Complete Work listed for completion or correction within designated form.
  3. Perform all cleaning in accordance with Section 01710, Final Cleaning.

#### 1.06 FINAL COMPLETION

- A. Within ten (10) calendar days after substantial completion, the Contractor shall submit to the Owner written certification that:
1. Contract Documents have been reviewed.
  2. Work has been examined for compliance with Contract Documents.
  3. Work has been completed in accordance with Contract Documents.
  4. Equipment and systems have been tested in the presence of the Owner and the appropriate County Operations and Maintenance personnel, and are operational.
  5. Work is completed and ready for final examination.
  6. Submittal of Closeout Documents as stipulated in paragraph 1.07 below.
- B. The Owner will make an examination to verify the status of completion within ten (10) calendar days after receipt of such certification.

- C. Should the Owner consider the Work incomplete or defective, or the Contractor has not demonstrated to the Owner that a “good faith” effort has been made within the time (72 hours) allotted in paragraph 1.05 A above, any Damages and/or Liquidated Damages, will be charged against the Contractor as defined and explained in Section 01100, Summary of Work
  - 1. The Owner will promptly notify the Contractor in writing of all deficiencies listing the incomplete or defective work.
  - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written Certification to the Owner that the Work is complete.
  - 3. The Owner will re-examine the Work.
- D. When the Owner concludes that the Work is complete, the Owner shall determine the number of days for which Liquidated Damages will be assessed and request the Contractor to prepare closeout submittals.
- E. Acceptance of the entire project shall commence after all contract work is complete, final inspections are made, corrective actions completed, the Work re-inspected, and after final acceptance by the Owner
- F. The date established by the Owner as the Final Completion Date shall initiate the guarantee and the warranty periods for all system components and the construction of the Project. The Project shall not be considered Final Complete until all Close Out Documents are properly completed and transmitted to the Owner.
- G. The Owner shall review the status of the Work and compare it to the request for final payment and compare it with the Project records for conformance to the final settlement requirements.
- H. The Owner shall receive from the Contractor, and maintain, the permit drawings and specification package, copy of all shop drawings and submittals, the “as-built” set of drawings and specifications, maintenance manuals as required by the contract and submitted by the Contractor. In addition, the Contractor shall provide spare parts and supplies, stored materials, special tools, filters, and other pertinent items as required under the Contract Documents to the Owner for transmittal to the appropriate County department(s)

1.07 CLOSEOUT SUBMITTALS

- A. Evidence of compliance with requirements of governing authorities:
  - 1. Certificate of Occupancy (n/a)
  - 2. Certificates of Inspection:
    - a. Mechanical and Electrical systems as required by the respective sections.
    - b. Asphalt Pavement.
    - c. Concrete Pavement
    - d. Storm Water Treatment System
- B. Project Record (Permit)Documents, in accordance with Section 01781
- C. Warranties and Bonds, in accordance with Section 01790.

D. Certificate of Insurance for Products and Completed Operations.

#### 1.08 EVIDENCE OF PAYMENTS AND RELEASE OF LIENS

A. Contractor's Affidavit of release of Liens.

1. Consent of Surety to Final Payment. Use form acceptable to the Owner
2. Contractor's Release or Waiver of Liens. Standard Form "Affidavit and Partial Lien Waiver". Use form acceptable to Owner.
3. Separate releases of waivers of liens from prime and subcontractors, suppliers and others with lien rights against property of the Owner together with a list of those parties, in accordance with Standard Form "Affidavit and Final Lien Waiver". Use form acceptable to Owner.

B. All submittals shall be duly executed before delivery to the Owner.

#### 1.09 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final Statement of accounting to the Owner.

B. Statement shall reflect all adjustments to the Contract Sum:

1. The original Contract Sum.
2. Additions and deductions resulting from:
  - a. Previous Change Orders.
  - b. Allowances.
  - c. Unit Prices.
  - d. Deductions for uncorrected Work.
  - e. Deductions for liquidated damages.
  - f. Other adjustments.
3. Total Contract Sum, as adjusted.
4. Previous payments.
5. Sum remaining due.

C. The Owner will prepare a final Change Order reflecting approved adjustments to the Contract Sum, which were not previously made by Change Orders.

#### 1.10 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit final Application for Payment in accordance with procedures and requirements stated in the Contract and Section 01290, Payment Procedures of the Project Manual.

#### 1.11 ADDITIONAL ADJUSTMENT

A. No adjustments to the Contract requested by the Contractor will be allowed if asserted after execution of Final Payment of Contract.

## 1.12 POST-CONSTRUCTION INSPECTION

- A. Prior to expiration of one (1) year from the Date of Final Completion, the Owner, or its designated representative, will make visual inspection of the Project Work in the company of the Contractor to determine whether further correction of Work is required in accordance with the provisions of the Contract. The Design/Builder shall be responsible for contacting the Owner and scheduling and coordinating the one (1) year inspection.
- B. The Owner will notify the Contractor, in writing, of any observed deficiencies.
- C. Contractor shall contact the Owner to arrange convenient time and establish schedule for correction of deficiencies.

### **PART 2 – PRODUCTS**

Not Used

### **PART 3 – EXECUTION**

Not Used

**END OF SECTION 01770**

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## SECTION 01781

### PROJECT RECORD DOCUMENTS

#### PART 1 – GENERAL

##### 1.01 REQUIRED INCLUDED

- A. Contractor shall comply with and be responsible for all requirements of the Project Manual, without exception.
- B. Contractor shall comply with the applicable requirements in this section and more specific requirements in: Section 00800, Special Project Conditions; Section 01100, Summary of Work; and Section 01770, Close Out Procedures.
- C. Contractor shall conform to the requirements of the Owner, Georgetown County, and such other federal, state agencies having jurisdiction.

##### 1.02 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents, in the Project Manual.
- B. Division 1, General Requirements in the Project Manual.

##### 1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. For duration of Project, maintain at job Site the following:
  - 1. One copy of the Drawings, Specifications, Addenda, shop drawings, products data, miscellaneous requested submittal data, Change Orders and other modifications to Contract, field orders, field test or written instructions.
  - 2. One copy of transmittal letters.
  - 3. One set of construction photographs.
  - 4. One set of samples.
  - 5. One copy of Permit Drawings as may be required by the appropriate governing agency.
  - 6. SCDHEC / OCRM Land Disturbance Authorization placard conspicuously displayed.
- B. Store documents and samples in Contractor's field office, or at an alternate location within thirty (30) minutes travel time, apart from documents used for construction.
  - 1. Provide files and racks for storage of documents.
  - 2. Provide locked cabinets or secure storage space for storage of samples.
- C. File documents and samples in accordance with CSI 16-division format.
- D. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- E. Make documents and samples available at all times for inspection by the Owner.

- F. Incomplete or out of order documents and samples will be grounds for not approving the Contractor's Application for Payment.
- G. Provide felt tip marking pens for recording information in color code designated by the Owner.
- H. Label each document "PROJECT RECORD" in neat large printed letters. Keep record documents current. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

#### 1.04 RECORD DRAWINGS

- A. Electronic data "As-Built" record drawings shall be required. The Owner will select electronic format and software to be used by Contractor.
- B. Permanent and accurate Record Drawings shall be created at Contractor's expense from the approved, original drawings, which shall be made available to a commercial reprographics service at an appropriate time.
- C. Legibly mark in color code designated by the Owner to record actual construction on designated Record Drawing prints:
  1. Depths of various elements of structure(s) foundations in relation to finish first floor datum.
  2. Horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements.
  3. Location of all internal utilities and appurtenances and features of the structure(s), including dimensional locations of underground activities and other work.
  4. Dimensional locations, vertical and horizontal, of site work, including utilities.
  5. Dimensional location, vertical and horizontal of Project Site access roads Kensington Boulevard, Middleton Street, and Pickens Street.
  6. Dimensional location, vertical and horizontal, of storm water drainage system including pipe invert elevations, catch basin and manhole structures, significant swale elevations, and existing pipe inverts at project tie-in area.
- D. Indicate the following installed conditions:
  1. All electrical systems, plumbing and mechanical systems and such other units installed requiring periodic maintenance or repair.
  2. Equipment locations (exposed and concealed), dimensioned from prominent building lines.
  3. Approved substitutions, contract modifications, and actual equipment and materials installed.
  4. Field modifications with dimensions and details.
  5. Modifications made by addenda, clarifications, Field Orders or Change Orders.
  6. Details not on original, approved contract drawings.
  7. Record information on a daily basis, or as often as necessary.
  8. Include references to related shop drawings and modifications.
- E. Contractor shall retain competent drafting services, as necessary, for transfer of "mark-up notations" from information recorded during construction.

- F. Contractor shall submit Record Documents drawings to the Owner for review and acceptance thirty (30) days prior to final closeout.
- G. Make revisions and additions as may be indicated by the Owner.
- H. Do not use these Drawings for reference or construction, nor allow them to leave the field office.

#### 1.05 RECORD SPECIFICATIONS AND ADDENDA

- A. Legibly mark up in color code designated by the Owner each Specification Section to record the following:
  - 1. Manufacturer, trade name, catalog name and supplier (with address and phone number) of each product and item of equipment actually installed.
  - 2. Modifications made by Change Order.
  - 3. Other matters not originally specified.

#### 1.06 RECORD SAMPLES

- A. Record in transmittal, if not indicated, manufacturer, trade name, catalog number.

#### 1.07 SUBMITALLS

- A. At Contract closeout, Contractor shall sign each final Record Drawing and cover of Record Specifications stating documents are complete and accurate, deliver project Record Documents to the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
  - 1. Date.
  - 2. Project title and Bid Number.
  - 3. Design/Builder's name and address.
  - 4. Title and number of each Record Document.
  - 5. Signature of Design/Builder or his/her authorized representative.
- C. Submit the following quantities of Record Documents:
  - 1. Two (2) complete and full sets of Project Record Drawings.
  - 2. Two (2) complete sets of "Up-Dated" Technical Specifications.
  - 3. A complete set of Project Record Drawings and Technical Specifications in electronic format.

#### 1.08 BURDEN OF ACCURACY

- A. Contractor shall bear all costs of damages of any nature incurred by the Owner due to inaccuracies or incompleteness of the submitted Project Record Documents.

## **PART 2 – PRODUCTS**

Not Used

**PART 3 – EXECUTION**  
Not Used

**END OF SECTION 01781**

**END OF**  
**DIVISION 0, BIDDING AND CONTRACT DOCUMENTS**

**And**

**DIVISION 1, GENERAL REQUIREMENTS**

## **DIVISION 2, TECHNICAL REQUIREMENTS**

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### **SECTION 02000**

### **SITE CLEARING**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work of this Section consists of all necessary clearing and grubbing as shown on the plans and specified in current SCDOT Technical Specification SC-M-201 and SC-M-202.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specification

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specification

**END OF SECTION 02000**

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## SECTION 02050

### SELECTIVE DEMOLITION

#### PART 1 - GENERAL

##### 1.1 1.1 SUMMARY

###### A. Section Includes:

1. Demolition and removal of selected portions of structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

##### 1.2 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

##### 1.3 FIELD CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Notify Engineer of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  1. Hazardous materials will be removed by Owner before start of the Work.
  2. If suspected hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.
- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  1. Maintain fire-protection facilities in service during selective demolition operations.

- F. Arrange selective demolition schedule so as not to interfere with Owner's operations.

#### 1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

### **PART 2 - PRODUCTS**

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected if required by utility provider before starting selective demolition operations.
- B. Inventory and record the condition of items to be removed and salvaged.

#### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Coordinate with Utility providers and locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished as required.
  - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  - 2. Arrange to shut off utilities with utility companies as required.
  - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems as required.

#### 3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent facilities to remain.

- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- C. Remove temporary barricades and protections where hazards no longer exist.

## 1.5 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  - 4. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
  - 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - 6. Dispose of demolished items and materials promptly. Comply with local agency requirements.
  - 7. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Removed and Salvaged Items:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers.
  - 3. Store items in a secure area until delivery to Owner.
  - 4. Transport items to Owner's storage area designated by Owner.
  - 5. Protect items from damage during transport and storage.
- C. Removed and Reinstalled Items:
  - 1. Clean and repair items to functional condition adequate for intended reuse.
  - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  - 3. Protect items from damage during transport and storage.
  - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Engineer, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

1.6 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

**END OF SECTION 02050**

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## SECTION 02100

### EROSION AND SEDIMENT CONTROL

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

Scope of Work: The work consists of all necessary erosion and sediment control as shown on the plans and specified herein. Provide protection of the environment during the construction of this project to reduce soil erosion and siltation to the lowest reasonably achievable level.

- A. Exercise every reasonable precaution, throughout the life of the project, to prevent the eroding of soil and the silting of rivers, streams, lakes, reservoirs, other water impoundments, ground or roadway surfaces, or other property. Erosion control practices to be used for this project are shown on the drawings and are to conform to South Carolina Department of Health and Environmental Control regulations.

#### PART 2 – PRODUCTS

- 2.1 Refer to the South Carolina Department of Health and Environmental Control BMP Handbook.

##### 2.2 STONE

- B. Provide #57 AASHTO stone for temporary sediment barriers around inlets and for temporary silt fence rock outlets.

##### 2.3 GRASSING

- A. Comply with Section 02800 - Seeding.

##### 2.4 SILT FENCE

- A. All posts to be self-fastener angle steel, 5' in length.
  - 1. Wooden posts are not acceptable.
- B. Woven wire shall conform to the requirements of ASTM A 116, Class I zinc coating for wire. Each woven square shall measure 5.33" X 12". The top and bottom wires shall be 10 gauge. All other wires shall be 12-1/2 gauge.
  - 1. Securely attach woven wire to posts with wire ties.
- C. Filter fabric shall be Mirafi 600X synthetic fabric as manufactured by Celanese Fibers Co., Bidim C34 as manufactured by DuPont or approved equal.
  - 1. Limit splices in filter fabric using continuous rolls whenever possible.
  - 2. Whenever splices are necessary a minimum overlap of 6" is required and all splices must occur at a post so that the integrity of the fence is not compromised.
  - 3. Securely attach filter fabric to top of woven wire and at posts with wire ties.

- D. Silt fences should be continuous and transverse to the flow. The silt fence should follow the contours of the site as closely as possible. Place the fence such that the water cannot runoff around the end of the fence.

## 2.5 EROSION CONTROL BLANKET

- A. Use erosion control blanket SC150, from North American Green or approved equal.
  - 1. Use Biostakes where staples are required or indicated on the drawings for stabilization.
    - a. Staple in pattern recommended by blanket manufacturer.
  - 2. Staple locations must be clearly marked on the blanket when stakes are used.

## 2.6 RIP-RAP

- A. Provide rip-rap which:
  - 1. Has thickness of 12" minimum.
  - 2. Weighs a minimum of 25 lbs. to a maximum of 150 lbs.
  - 3. Has at least 60% of stone weighing more than 60 lbs.

## 2.7 SEDIMENT TUBES

- A. Use sediment tubes as designated on the plans to control erosion along contours, around inlets, and in drainage conveyance swales.
- B. Use sediment tubes manufactured by an experienced manufacturer producing tubes for erosion control.
- C. Tube fill is to be composed of 100% weed free materials consisting of a mix of some or all of the following: curled excelsior wood, natural coconut fibers, hardwood mulch and agricultural straw.
- D. Tubular netting is to be constructed of a flexible outer netting that will contain the fill materials and sediment. Netting is to be constructed from seamless high density polyethylene, polyester, and/or ethyl vinyl acetate, photodegradable materials, treated with ultraviolet stabilizers.
- E. Tubes are to be minimum 20-inches in diameter with minimum weight of 3.2 lbs per foot +/- 10%. Minimum tube length is 10-feet. Netting weight is to be 0.35 oz/foot minimum.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Construct and maintain all erosion control measures until the substantial completion of the project.

### 3.2 TEMPORARY CONSTRUCTION ENTRANCE/EXIT

- A. Construct a gravel area or pad at points where vehicles enter and leave a construction site.
- B. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade and place gravel to the grade and dimensions shown on the plans.
- C. Construct drainage channels to carry water to a sediment trap or other suitable outlet.
- D. Use geotextile fabrics to improve stability of the foundation in locations subject to seepage or high water table.
- E. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site by periodic top dressing with two inches of stone.

- F. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary.
- G. Immediately remove objectionable materials spilled, washed, or tracked onto public roadways.

### 3.3 TEMPORARY GRASSING

- A. Provide a temporary cover for erosion control on disturbed areas that will remain unstabilized for a period of more than 30 days.
- B. This practice applies to cleared areas, diversions, dams, temporary sediment basins, temporary road banks, and topsoil stockpiles where vegetation is needed for less than 1 year.
- C. Provide grassing on slope 5% or greater within 14 days of disturbance. Comply with Section 02800.

### 3.4 SILT FENCE

- A. Provide silt fence barrier where shown on the plans and on utility construction parallel to the disturbed trench where perpendicular sheet flow runoff occurs on disturbed areas with slopes greater than 4%.
- B. Place at the extreme limits of the area to be disturbed as shown.
- C. Construct temporary sediment barriers of filter fabric, buried at the bottom, stretched and supported by posts and install below small disturbed areas as indicated on the drawings to retain sediment by reducing the flow velocity to allow sediment deposition.
- D. Space posts 10'-0" on center, maximum or as indicated on the drawings.
- E. Remove sediment deposits prior to reaching one-third height of the fence.
- F. Monitor site frequently and place additional silt fencing should evidence indicate that erosion is about to occur at locations other than those shown on plan.

### 3.5 INLET PROTECTION

- A. Construct temporary sediment barriers around storm drain curb inlets using block and gravel as indicated on the drawings.
- B. Construct metal frame barriers around grate and frame of drop inlets as indicated on the drawings.
- C. Inspect structure after each rainfall and repair as required.
- D. Remove sediment when trap reaches one-half capacity.
- E. Remove structure when protected areas have been stabilized.

### 3.6 EROSION CONTROL BLANKET

- A. Provide on areas as shown on the plans or on all embankments with slopes equal to or steeper than 2-1/2:1.

### 3.7 SILT FENCE ROCK OUTLETS

- A. Utilize temporary silt fence rock outlets as indicated on the plans or directed by Engineer.
- B. Provide temporary silt fence rock outlets constructed of both rip-rap and #57 stone, as illustrated on the plans.

### 3.8 SEDIMENT TUBES

- A. Construct small U-shaped trench that is 20% of depth of tube perpendicular to stormwater flow pattern.
- B. Anchor tube in trench according to manufacturer's recommendations.
- C. Compact the up steam soil surface adjacent to the tube.
- D. Backfill sediment tube with coarse filter material on the upstream side.
- E. Follow manufactures recommendation on installation.
- F. Maintain, repair and/or replace sediment tubes as required to maintain their effectiveness throughout the project

### 3.9 Rip Rap

- A. Where thickness is not shown on the plans, it shall be 12".
- B. The slope upon which this rip-rap is to be placed shall conform with the cross section shown on the plans or as directed by the Engineer.
- C. Properly compact depressions that may be filled in trimming and shaping the slope.
- D. Install filter fabric, lapping sides 12".
- E. Begin placing in a trench at least 2' below the toe of the slope.
- F. Firmly imbed against the slope and the adjoining piece with the sides in contact and with broken joints.
- G. Fill the spaces between the larger pieces with spalls of suitable size, thoroughly ram into place.
- H. The finished surface shall present an even, tight surface true to line, grade and section.

### 3.10 MAINTENANCE

- A. Place all erosion control devices or measures prior to any land disturbing activity within the drainage area they are located.
- B. Inspect erosion control devices and clean or otherwise remove silt buildup as necessary once a week or 24-hours following a rain event of  $\geq 0.5$ ".

### 3.11 REMOVAL

- A. Remove temporary structures after protected areas have been stabilized.

**END OF SECTION 02100**

## **SECTION 02105**

### **GENERAL EXCAVATION, FILLING AND BACK FILLING**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work of this Section consists of all necessary excavation, filling and back filling as shown on the plans and specified in SCDOT Technical Specification SC-M-203 to SC-M-205.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02105**

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**SECTION 02110**  
**FLOWABLE FILL**

**PART 1 - GENERAL**

1.1 DESCRIPTION

Scope of Work: The work of this Section consists of all flowable fill areas due to construction as shown on the plans and specified in SCDOT Technical Specification SC-M-210.

**PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

**PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02110**

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## **SECTION 02300**

### **TRENCHING**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work of this Section consists of all necessary trenching as shown on the plans and specified in SCDOT Technical Specification SC-M-714.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02300**

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## **SECTION 02335**

### **SUBGRADE**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary installation of sub-grade as shown on the plans and specified in SCDOT Technical Specification SC-M-208.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02335**

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## **SECTION 02340**

### **BASE COURSE**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary installation of base course as shown on the plans and specified in SCDOT Technical Specification SC-M-301 to SC-M-310.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02340**

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## **SECTION 02345**

### **PROOF ROLLING**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary proof rolling of the sub-grade and base course as shown on the plans and specified in SCDOT Technical Specification SC-M-211.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications.

**END OF SECTION 02345**

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## **SECTION 02400**

### **HOT MIX ASPHALT PAVEMENT**

#### **PART 1 - GENERAL**

##### 1.1 DESCRIPTION

Scope of Work: The work consists of all necessary Hot Mix Asphalt (HMA) as shown on the plans and specified in SCDOT Technical Specification SC-M-401 to SC-M-403.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02400**

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## **SECTION 02450**

### **ROADWAY PAVEMENT MARKINGS**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary roadway pavement markings due to project construction as shown on the plans and specified in SCDOT Technical Specification SC-M-625.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02450**

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## **SECTION 02460**

### **THERMOPLASTIC PAVEMENT MARKINGS**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary thermoplastic pavement markings due to project construction as shown on the plans and specified in SCDOT Technical Specification SC-M-627.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02460**

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## **SECTION 02500**

### **STORM DRAINAGE SYSTEM**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary storm drainage systems as shown on the plans and specified herein.

- A. Concrete pipe, refer to SCDOT Specifications SC-M-714

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications and/ or Section

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications and/ or Section

**END OF SECTION 02500**

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## **SECTION 02525**

### **PRECAST CONCRETE BOX CULVERTS**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary concrete box culverts as shown on the plans and specified herein.

- A. Precast Concrete Box Culverts, refer to SCDOT Standard Specifications for Highway Construction Section 722.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications and/ or Section

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications and/ or Section

**END OF SECTION 02525**

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## **SECTION 02550**

### **PRECAST DRAINAGE STRUCTURES**

#### **PART 1 - GENERAL**

##### **1.01 DESCRIPTION**

Scope of Work: The work consists of all necessary installation of pre-cast drainage structures as shown on the plans and specified in SCDOT Technical Specification SC-M-719.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02550**

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## SECTION 02560

### CAST-IN-PLACE CONCRETE

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide cast-in-place concrete, including formwork and reinforcement, where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Reference standards: Comply with the following codes, specifications and standards, except as otherwise shown or specified:
  - 1. American Concrete Institute (ACI) Publications:
    - ACI 301 Specification for Structural Concrete for Buildings
    - ACI 305 Recommended Practice for Hot Weather Concreting
    - ACI 306 Recommended Practice for Cold Weather Concreting
    - **ACI 315 Manual of Standard Practice for Detailing Reinforced Concrete Structures**
    - ACI 318 Building Code Requirements for Reinforced Concrete
    - ACI 347 Recommended Practice for Concrete Framework
  - 2. American Society for Testing and Materials (ASTM) Publications:
    - A185 Welded Steel Wire Fabric for Concrete Reinforcement
    - A615 Deformed and Plain Billet Steel Bars for Concrete Reinforcement
    - C31 Making and Curing Concrete Test Specimens in the Field
    - C33 Concrete Aggregates
    - C39-72 Compressive Strength of Cylindrical Concrete Specimens
    - C94 Ready-Mixed Concrete
    - C150 Portland Cement
    - C260 Air-Entraining Admixtures for Concrete
  - 3. Concrete Reinforcing Steel Institute (CRSI):
    - "Manual of Standard Practice"

4. American Welding Society (AWS) Publication:  
     --                    D12.1-61    Welding Reinforcement Steel, Metal  
   Inserts and Connections in Reinforced Concrete
- C. Testing agency: A testing laboratory will be retained by the Owner to perform material evaluation tests required by these specifications.
- D. Qualifications of contractors performing concrete work: Minimum of two (2) years experience on comparable concrete projects.
- E. Plant qualification: Plant equipment and facilities shall meet all requirements of the Check List for Certification of Ready Mixed Concrete Production Facilities of the National Ready Mixed Concrete Association and ASTM C94.

### 1.3 SUBMITTALS

- A. Within 15 calendar days after receiving the Owner's Notice to Proceed, submit proposed mix designs for approval.
  1. Proportions shall be determined by means of laboratory tests of concrete made with the cement and aggregate proposed for use.
  2. Provide report in detail from an approved testing laboratory showing 7-day and 28-day strengths obtained using materials proposed.
  3. Required average strength above specified strength:
    - a. Determinations of required average strength above specified strength ( $f'_c$ ) shall be in accordance with ACI 318 and ACI 301.
    - b. Establish the required average strength of the design mix using the materials proposed to be employed. Standard deviations shall be determined by thirty tests. Average strength used for selecting proportions shall exceed specified strength ( $f'_c$ ) by at least:
 

400 psi	Standard deviation is less than 300
550 psi	Standard deviation is 300 to 400
700 psi	Standard deviation is 400 to 500
900 psi	Standard deviation is 500 to 600
1200 psi	Standard deviation is above 600 or unknown
    - c. When the ready-mix producer does not have a record of past performance, the combination of materials and the proportions selected shall be selected from trial mixes having proportions and consistencies suitable for the work using at least three (3) different water/cement ratios which will produce a range of strengths encompassing those required. Average strength required shall be 1200 psi above specified strength.
  4. Cost of this work shall be borne by the Contractor.
- B. Manufacturer's data: Submit manufacturer's specification with application instructions for proprietary materials and items, including curing compound, form release agents, admixtures, patching compounds, and others as required by the Engineer.
- C. Shop drawings: Submit the following shop drawings to the Engineer for approval before work is started:
  1. Reinforcing steel drawings: Prepare in accordance with ACI 315. Indicate bending diagrams, assembly diagrams, splicing and laps of bars, dimensions and details of bar reinforcing and accessories.
  2. Cementitious coating.

## 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01640.
- B. Store reinforcement in a manner that will avoid excessive rusting or coating by grease, oil, dirt and other objectionable materials.
- C. Keep reinforcement in separate piles or racks so as to avoid loss of identification after bundles are broken.

## PART 2 - PRODUCTS

### 2.1 FORMS

- A. Use form materials conforming to ACI 347.
- B. Form lumber: Use lumber of sufficient quality and grade, size and stiffness to adequately support the work and ensure dimensional accuracy.
- C. Form ties: Use form ties which do not leave an open hole through the concrete and which permit neat and solid patching at every hole.
  - 1. Use ties with cones that allow a 1" break back and facilitate patching.
  - 2. On structures containing water or other liquid or below grade structures, use embedded rod ties with integral waterstops in addition to cones.
  - 3. Through-bolts that utilize a removable tapered sleeve in water containing and below grade applications: Use mechanical EPDM rubber plugs to seal holes made after removal of taper ties. Acceptable product is X-Plug by the Greenstreak Group, Inc. 800-325-9504. Follow manufacturers' instructions for installation. Friction fit plugs are not allowed.
  - 4. Wire ties and wood spreaders will not be permitted.
- D. Form coatings: Form release coating shall be neat oil with surface wetting agent or chemical release agent which effectively prevents absorption of moisture, prevents bonding with concrete, is non-staining to concrete and leaves the concrete with a paintable surface.
  - 1. On surfaces to receive an applied coating, use a residual free chemical form release agent which is compatible with the applied coating and will not prevent the applied finish from satisfactorily bonding to the concrete.
- E. Chamfer strips: Chamfer strips shall be wood or polyvinyl strips or approved equal, designed to be nailed in the forms to provide a 3/4" chamfer (unless indicated otherwise) at all exposed edges and corners of concrete members.

### 2.2 REINFORCEMENT

- A. Comply with the following as minimums:
  - 1. Bars: ASTM A615, Grade 60, unless otherwise shown on the Drawings, using deformed bars for Number 3 and larger.
  - 2. Welded wire fabric: ASTM A185.
    - a. Use sheet (mat) welded wire fabric only.
    - b. Welded wire fabric supplied in rolls will not be accepted.
  - 3. Bending: ACI 315 and ACI 318.
- B. Fabricate reinforcement to the required shapes and dimensions, within fabrication tolerances stated in the CRSI "Manual of Standard Practices".
- C. Do not use reinforcement having any of the following defects:

1. Bar lengths, depths, or bends exceeding the specified fabricating tolerances.
  2. Bends or kinks not indicated on the Drawings or required for this Work.
  3. Bars with excessive rust, scale, dirt, oil or other defects which will reduce the bond or the effective cross section of the bar.
- D. Furnish all support bars, tie bars, chairs, bolsters, etc. required for properly supporting and spacing bars in the forms.
1. For slabs on grade, use supports with stand plates or horizontal runners where wetted base materials will not support chair legs. Other supports must be approved by the Engineer.
  2. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs which are hot-dip galvanized, plastic protected or stainless steel.
  3. Supply supports for welded wire fabric as follows:

**Welded Wire Fabric Support Spacing**

Welded Wire Reinforcement (diameter)	Welded Wire Spacing (inches)	Maximum Support Spacing (feet)
W9 or larger	12 and greater	4
W5 to W8	12 and greater	3
W9 and larger	Less than 12	3
W4 to W8	Less than 12	2
Less than W4	Less than 12	1.5

- E. Tie wire: FS QQ-W-461, annealed steel, black, 16 gauge minimum.
- F. Welding electrodes: AWS A5.1, low hydrogen, E70 series.
- G. Splice devices: Shall be sized to develop one hundred twenty-five (125%) percent of yield strength of bar.

**2.3 CONCRETE MATERIALS**

- A. Cement: Use portland cement: ASTM C150, Type I, Type I-P or Type II, low alkali.
1. Where concrete will be exposed to sewage, use Type II or I-P cement.
  2. Fly ash shall conform to ASTM C618, Class C or F.
  3. Fly ash content shall not exceed 20% by weight of the total amount of cementitious materials (portland cement plus fly ash).
- B. Aggregates:
1. Fine aggregate: Conform to ASTM C33.
  2. Coarse aggregate: Conform to ASTM C33, Size #57.
- C. Water: Clean and potable and free from injurious amounts of deleterious materials.
- D. Admixtures:
1. Air entraining admixture: ASTM C260.
  2. Water reducing, set controlling admixture: Conform to ASTM C494.

- a. Type A - water reducing.
  - b. Type D - water reducing and retarding.
  - 3. Superplasticizers: Conform to ASTM C494, Types F and G.
    - a. Use superplasticizers in thin section placements and in areas of congested reinforcing and/or embedded items, or where otherwise approved by the Engineer.
    - b. Use where conventional consolidation techniques are impractical.
  - 4. Do not use admixtures containing calcium chloride.
- E. Fiber reinforcing:
- 1. Use fiber reinforcing where indicated on the drawings.
  - 2. Provide polypropylene or co-polymer fibers as manufactured by High Tech Fibers, Inc., Fibermesh Company or an approved equal.
  - 3. Where required, use fiber reinforcing at a rate of 2.0 lbs. per cubic yard unless another rate is indicated on the drawings.
- F. Curing compounds:
- 1. On all vertical and formed surfaces, construction joints, basin slabs, surfaces to receive an applied coating or finish, and other surfaces except as otherwise indicated or specified, use a non-residual, non-staining curing compound conforming to ASTM C309 Type 1 and 1D. Acceptable products are:
    - a. L&M Cure by L&M Construction Chemicals, Inc.
    - b. Horn WB-75 by A.C. Horn Company.
    - c. Sonosil by Sonneborn, Inc.
    - d. Approved equal.

## 2.4 CONCRETE MIXES

- A. Provide concrete with the compressive strengths shown on the Drawings. When such strengths are not shown on the Drawings, provide the following 28-day strengths as minimum:
- |    |  |                                 |
|----|--|---------------------------------|
| 1. | All structural concrete except as indicated in Nos. 2 and 3 below or as noted otherwise on the plans | 4000 psi                        |
| 2. | All sidewalks, curbs and gutters, and unreinforced foundations                                       | 4000 psi with fiber reinforcing |
| 3. | Thrust blocking, backfill or encasement for piping, and concrete fill                                | 2500 psi                        |
| 4. | Prestressed or precast concrete:   | 5000 psi                        |
- B. Maximum water cement ratios:
- |                   |      |
|-------------------|------|
| 4000 psi concrete | 0.5  |
| 3000 psi concrete | 0.53 |
| 2500 psi concrete | 0.67 |
- C. Entrained air:
- |                            |              |
|----------------------------|--------------|
| 3000 and 4000 psi concrete | 5% ± 1%      |
| 2500 psi concrete          | Not Required |
- D. Slump:
- |                            |         |
|----------------------------|---------|
| 3000 and 4000 psi concrete | 4" ± 1" |
| 2500 psi concrete          | 5" ± 1" |
- E. Production of concrete:

1. General: Concrete shall be ready mixed and shall be batched, mixed and transported in accordance with ASTM C94 except as otherwise indicated.
2. Monitor time and mix proportions by plant delivery slips.
3. Air entraining admixtures: Add air entraining admixture into the mixture as a solution and measure by means of an approved mechanical dispensing device.
4. Water reducing and retarding admixture: Add water reducing and retarding admixture and measure as recommended by the manufacturer.
5. Addition of water to the mix upon arrival at the job site shall not exceed that necessary to compensate for a 1" loss in slump, nor shall the design maximum water-cement ratio be exceeded. Water shall not be added to the batch at any later time.
6. Weather conditions: Control temperature of mix as required by ACI 306 "Cold Weather Concreting" and by ACI 305 "Hot Weather Concreting".

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Water, mud, organic, and other detrimental material shall be removed from excavations before concrete is deposited.
- C. Notify the Engineer prior to placing concrete and place no concrete until the formwork, reinforcing and embedded items have been observed by the Engineer.

### 3.2 FORMWORK

- A. General:
  1. Construct forms in conformance with ACI 347.
  2. Design, erect, support, brace and maintain formwork so it will safely support vertical and lateral loads which might be applied until such loads can be supported safely by the concrete structure.
  3. Construct forms to the exact sizes, shapes, lines and dimensions shown, and as required to obtain accurate alignment, location, grades, level and plumb work in the finished structure.
  4. Provide formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints and provide backup material at joints as required to prevent leakage and prevent fins.
- B. Form construction and erection:
  1. Construct forms in conformance with ACI 347.
  2. Provide for openings, offsets, keyways, recesses, moldings, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts and other embedded items as required.
  3. Hold inner and outer forms for vertical concrete together with combination steel ties and spreaders approved by the Engineer.
  4. Unless specifically stated otherwise, provide 3/4" chamfer at all exposed edges of concrete.
  5. Provide temporary openings in the formwork where necessary to facilitate cleaning and inspection of the formwork.
  6. Coat form contact surfaces with approved form coating compound prior to placing reinforcing steel.
  7. Do not allow excess form coating material to accumulate in the forms or to come in contact with reinforcing surfaces which will bond to fresh concrete.

8. Side forms for footings may be omitted, and concrete may be placed directly against excavation only when requested by the Contractor and approved by the Engineer.
  9. Provide a positive means of adjustment of shores and struts and ensure that all settlement is taken up during concrete placing.
  10. Construct blockouts and formed openings of sufficient size and proper location to permit final alignment of items within it or passing through it.
    - a. Allow sufficient space for grouting, packing or sealing around any items penetrating the opening as may be required to ensure watertightness.
    - b. Provide openings with continuous keyways with waterstops where required, and provide a slight flare to facilitate grouting and the escape of entrapped air during grouting.
    - c. Provide only blockouts or openings that are shown on the drawings or otherwise approved by the Engineer.
- C. Formwork reuse: Reuse only forms that are in good condition and which maintain a uniform surface texture on expose concrete surfaces.
1. Apply a light sanding as necessary to obtain a uniform texture.
  2. Plug unused tie holes and penetrations flush with the form surface.
- D. Removal of forms:
1. Do not disturb or remove forms until the concrete has hardened sufficiently to permit form removal with complete safety. Do not remove shoring until the member has acquired sufficient strength to support its own weight, the load upon it, and the added load of construction.
  2. Do not remove forms before the following minimum times without prior approval from the Engineer:
 

a. Sides of footings or slabs on grade	24 hrs
b. Walls not supporting load	48 hrs
c. Vertical sides of beams	48 hrs
d. Columns not supporting load	48 hrs
e. Suspended slabs or beam bottoms (forms only)	10 days
  3. In determining the minimum stripping times, consider only the cumulative time during which the ambient temperature of the air surrounding the concrete is above 50°.
  4. Do not remove shoring for suspended slabs or beams until the concrete has reached 75% of the specified 28 day strength.
  5. When reshoring or backshoring is permitted or required, plan the operations in advance and submit procedures to the Engineer for approval.
    - a. Design and plan all reshoring operations to support all construction loading and in accordance with ACI 347.
  6. Exercise care in removing forms from finished concrete surfaces so that surfaces are not marred or gouged and that corners are true, sharp and unbroken.
  7. Do not permit steel spreaders, form ties, or other metal to project from or be visible on any concrete surface except where so shown on the drawings.
  8. Whenever the formwork is removed during the curing period, continue to cure the exposed concrete by one of the methods specified herein.

### 3.3 EMBEDDED ITEMS

- A. Embedded items: Set anchor bolts and other embedded items accurately and securely in position in the forms until the concrete is placed and set.
1. Use templates where practical for all anchor bolts.
  2. Check locations of all anchor bolt and special castings prior to placing concrete and verify locations after concreting.

- B. Piping cast in concrete:
  - 1. Install and secure sleeves, wall pipes and pipe penetrations before placing concrete.
  - 2. Do not weld or otherwise attach piping to reinforcing steel.
  - 3. Support piping to be encased in concrete securely and on firm foundation so as to prevent movement or settlement during concreting.
- C. Locate electrical conduit so that it will not impair the strength of the construction.
  - 1. Do not use conduits running within (not passing through) a slab, wall or beam that are larger in outside diameter than 1/3 overall concrete thickness unless otherwise approved by the Engineer.
  - 2. Do not space conduits closer than three conduit diameters apart unless otherwise approved by the Engineer.

### 3.4 REINFORCEMENT

- A. General: Comply with the specified codes and standards and Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars" for details and methods of reinforcement placement and supports and as herein specified.
  - 1. Clean reinforcement and remove loose dust and mill scale, earth, and other materials which reduce or destroy bond with concrete.
  - 2. Position and secure reinforcement against displacement by forms, construction, and the concrete placement operations.
  - 3. Use adequate number of ties to secure reinforcing.
  - 4. Do not weld or field bend reinforcing without prior approval by the Engineer.
- B. Placing reinforcing:
  - 1. Provide and install all chairs, runners, bolsters, standees and other accessories in sufficient quantities to satisfactorily position the reinforcing and hold it in place during concrete placement.
  - 2. Support reinforcing for slabs on ground on chairs or bolsters with stand plates or a properly sized concrete cube.
    - a. Use concrete bricks as supports only as approved by the Engineer.
  - 3. Secure and tie dowels in place prior to placing concrete. Do not press dowels into wet concrete.
- C. Concrete cover: Unless otherwise indicated on the drawings or specified herein, install reinforcing with clear concrete coverage in conformance with ACI 318.
  - 1. All reinforcement, regardless of size, exposed to water or sewage shall have 2" cover.
  - 2. Place reinforcement a minimum of 2" clear of any openings or metal pipe or fittings.
- D. Splicing reinforcement: Splice reinforcement steel in accordance with the latest revisions of ACI 318 "Building Code Requirements for Reinforced Concrete" unless shown otherwise on the drawings.
  - 1. All splices at wall corners or intersections and at wall and foundation intersections shall be Class B tension splices per ACI 3-18, Sections 12.2.2 and 12.15.
  - 2. All other splices of vertical or horizontal steel in walls shall be Class B tension splices as per ACI 318 per ACI 318, Sections 12.2.2 and 12.15.

3. Horizontal ring steel in circular, non-prestressed concrete tanks shall be Class B tension splices and the splices shall be staggered so that no more than 50% of the bars are spliced at any one location.
  4. All welded or mechanical splicing devices shall develop 125% of the yield strength of the bar.
  5. Column vertical bars shall lap 30 bar diameters with dowels at the base of the column unless otherwise noted. Dowels shall be the same size and quantity as column vertical bars unless otherwise noted.
  6. All splices not otherwise shown or specified shall be Class B tension lap splices per ACI 318, Sections 12.2.2 and 12.15.
- E. Tolerances: Place bars in the locations indicated within the tolerances conforming to the CRSI "Manual of Standard Practice".
- F. Welded wire mesh: Install welded wire fabric in as long of a length as practicable and lay flat before placing concrete.
1. Use only mat welded wire fabric. Do not use welded wire fabric from rolls.
  2. Support and tie mesh to prevent movement during concrete placement.
  3. Lap adjoining pieces at least one full mesh and lace splices with wire.
  4. Provide, at a minimum, supports for welded wire fabric according to the Table in Section 2.2.D.3. Confirm the adequacy of the support spacings listed therein for the anticipated construction loads. Increase the number of supports, if necessary, to assure that the final position of the welded wire fabric will conform to that shown on the drawings.
  5. Do not place welded wire fabric on the subbase surface and then hook or "pull up" the reinforcement during concrete placement.
  6. Do not lay welded wire fabric on top of the freshly placed concrete and then "walk it" into place.

### 3.5 PLACING CONCRETE

#### A. Preparation:

1. Remove foreign matter accumulated in the forms.
2. Rigidly close openings left in the formwork.
3. Wet wood forms sufficiently to tighten up cracks. Wet other material sufficiently to maintain workability of the concrete.
4. Use only clean tools.
5. Provide and maintain sufficient tools and equipment on hand to facilitate uninterrupted placement of the concrete.
6. Before commencing concrete, inspect and complete installation of formwork, reinforcing steel and all items to be embedded or cast-in.

#### B. Conveying:

1. Transport and handle concrete from the truck to the place of final deposit as rapidly as practicable by methods which will prevent segregation or loss of ingredients to maintain the quality of the concrete.
2. Provide equipment for lifting, dumping, chuting, pumping or conveying the concrete, of such size and design as to ensure a practically continuous flow of concrete at the delivery and without separation of materials.
3. Use hoppers and elephant trunks where necessary to prevent the free fall of concrete for more than 4'.
4. Do not use concrete that is not placed within 1-1/2 hours after water is first introduced into the mix unless the slump is such that it meets the specified limits without the addition of water to the batch.

#### C. Placing:

1. Deposit concrete as nearly as practicable in its final location so as to avoid separation due to rehandling and flowing.
  2. Deposit concrete in horizontal layers not deeper than 2', avoiding inclined layers.
  3. Place concrete at such a manner that concrete upon which fresh concrete is deposited is still plastic.
  4. Bring slab surfaces to the correct level with screeds set to the proper elevation.
- D. Hot weather placement: Place concrete in hot weather in accordance with ACI 305 "Hot Weather Concreting" and as specified herein.
1. Do not place concrete whose temperature exceeds 100°F.
  2. Thoroughly wet forms and reinforcing prior to placement of concrete.
  3. Use additional set retarder as necessary to increase set time.
  4. Limit the size of the pour where it may reduce the likelihood of cold joints due to reduced set time.
  5. Shade the fresh concrete as soon as possible after placing.
  6. Start curing as soon as the concrete is sufficiently hard to permit without damage.
- E. Cold weather placement: Place concrete in cold weather in accordance with ACI 306 and as specified herein.
1. Except when authorized specifically by the Engineer, do not place concrete when the atmospheric temperature is below 40°F.
  2. When cold weather placement is approved by the Engineer, heat either the mixing water or aggregate or both so that the concrete temperature is between 65°F and 85°F.
  3. Protect the freshly placed concrete by adequate housing or covering and provide heat to maintain a temperature of not less than 50°F for not less than four days.
  4. Do not add salts, chemicals, or other materials to the concrete mix to lower the freezing point of the concrete.
- F. Consolidation:
1. Consolidate each layer of concrete immediately after placing, by use of internal concrete vibrators supplemented by hand spading, rodding, or tamping.
    - a. Use vibrators having a 2" head diameter and a minimum frequency of 8000 vibrations per second.
    - b. Provide sufficient number of vibrators to properly consolidate the concrete, keeping up with placement operations.
    - c. Provide at least one spare vibrator on site.
  2. Insert and withdraw vibrators at points approximately 18" apart.
  3. Do not vibrate forms or reinforcement.
  4. Do not use vibrators to transport concrete inside the forms.

### 3.6 PROTECTION

- A. Protect the surface finish of newly placed concrete from damage by rainwater or construction traffic.
- B. Do not apply design loads to structures until the concrete has obtained the specified strength.
1. Do not backfill against walls until they have reached the specified strength and all supporting or bracing walls, slabs, etc. have also reached the specified strength, unless otherwise permitted by the Engineer.
  2. Protect structures from construction overloads.

### 3.7 CURING

- A. Beginning immediately after placement, protect concrete from premature drying, excessively hot and cold temperatures and mechanical injury.
- B. Continuously cure concrete for a period of not less than 7 days after placement.
  - 1. When seven-day cylinder breaks indicate, in the opinion of the Engineer, the possibility of low strength concrete, provide additional curing as per the request of the Engineer.
  - 2. When temperatures during the curing period fall below 40°F, provide additional curing time as directed by the Engineer.
- C. Unless otherwise directed by the Engineer, cure concrete not in contact with forms in accordance with one of the following procedures:
  - 1. Ponding or sprinkling: Keep entire concrete surface wet by continuously sprinkling or by allowing water to pond, covering all surfaces.
  - 2. Wet burlap: Thoroughly wet and cover all concrete surfaces with wet burlap mats as soon as the concrete has set sufficiently to avoid marring the surface.
    - a. Keep the burlap continuously wet during the curing period.
  - 3. Curing blankets: Thoroughly wet concrete surfaces to be cured and cover with curing blankets as soon as the concrete has set sufficiently to avoid marring the surface.
    - a. Weight the blankets down to maintain close contact with the concrete surface.
    - b. Use sheets of waterproof kraft paper with the joints between sheets taped continuously; or
    - c. Use sheets of 4 mil or thicker polyethylene with the joints between sheets continuously taped.
  - 4. Wet sand: Apply a layer of sand over the entire surface and keep it continuously wet.
  - 5. Curing compound: Apply curing compound immediately after completion of the finish on unformed surfaces and within two hours after removal of forms on formed surfaces.
    - a. Spray the entire surface with two coats of liquid curing compound, applying the second coat in the direction of 90° to the first coat.
    - b. Apply compound in accordance with the manufacturer's instructions to cover the surface with a uniform film which will seal thoroughly.
- D. Hot weather: When necessary, provide wind breaks, shading, fog spraying, sprinkling, ponding or wet covering with a light colored material applying as quickly as concrete hardening and finishing operations will allow.

### 3.8 CONCRETE FINISHING

- A. Finish schedule: Unless otherwise indicated on the drawings, finish all concrete surfaces in accordance with the following schedule:
  - 1. Form finish: Formed surfaces not ordinarily exposed to view, including:
    - a. Interior walls of open tanks below a line one foot lower than the lowest normal water level.
    - b. The underside of slabs not exposed to view.
    - c. Walls below grade.
  - 2. Cementitious coating: All formed surfaces exposed to view including:
    - a. Interior walls of tanks above a line one foot lower than the lowest normal water level.
    - b. The underside of slabs, soffits, etc. exposed to view.

3. Float finish: Slab surfaces not exposed to view or not receiving an applied thin finish, including:
  - a. Bottom slabs of tanks or structures containing water sewage or other liquid.
  - b. Foundations not exposed to view.
  - c. Roof slabs to be covered with insulation and/or built-up roofing.
4. Trowel finish: Interior slab surfaces exposed to view or to receive an applied thin film coating or floor finish, including:
  - a. Interior, indoor slabs and floors of buildings.
  - b. Surfaces on which mechanical equipment moves.
  - c. Floors receiving vinyl tile, resilient flooring, carpet, paint, etc.
5. Broom finish: Exterior, outdoor slabs exposed to view including:
  - a. Outdoor floor slabs and walkways.
  - b. Other floors which may become wet or otherwise require a non-skid surface.
  - c. Sidewalks and concrete pavements.
6. Scratch finish: Surfaces which are to receive a thick topping or additional concrete cast against them including:
  - a. Surfaces receiving concrete equipment pads.
  - b. Floors receiving concrete topping.
  - c. Construction joints not otherwise keyed.
7. Edge finish: Exposed edges of slabs not receiving chamfer including:
  - a. Sidewalk edges and joints.
  - b. Pavement edges and joints.
  - c. Other slab edges not chamfered.

B. Finishing procedures:

1. Form finish:
  - a. Repair defective concrete.
  - b. Fill depressions deeper than 1/4".
  - c. Fill tie holes.
  - d. Remove fins exceeding 1/8" in height.
2. Cementitious finish:
  - a. Patch all tie holes and defects and remove all fins.
  - b. Within one day of form removal, fill all bug holes, wet the surfaces and rub with carborundum brick until a uniform color and texture are produced; or
  - c. Dampen surfaces, brush apply a grout slurry consisting of 1 part portland cement to 1-1/2 parts sand, and rub the surface vigorously with a stone. Remove all excess grout.
  - d. Provide a two coat cement base waterproofing, sealing finish of Thoroseal and Thoroseal Plaster Mix as manufactured by Standard Dry Wall Products, Inc. or an approved equal.
    - 1) Patch all tie holes and defects and removal all fins, and clean surface of all dirt, laitance, grease, form treatments, curing compounds, etc.
    - 2) Key coat: Apply key coat of Thoroseal at a rate of two (2) lbs. per sq. yd. by fiber brush. Mix material using one part of Acryl 60 to three parts clean water. Should material start to drag during application, dampen surface with water. During hot weather periods, dampen surfaces with water prior to application of key coat material. Key coat shall be allowed to cure for five (5) days before applying finish coat.
    - 3) Apply a finish coat consisting of a four (4) to six (6) lbs. per sq. yd. application of Thoroseal Plaster Mix using steel trowel or spray gun. Color to be selected by the Owner. Mix dry material using one (1) part Acryl 60 to three (3) parts clean water. Firmly press the mix into all voids and level with a steel trowel. When surface is set so that it will not roll or lift, float it uniformly using a sponge float.

3. Float finish:
  - a. Begin floating when the water sheen has disappeared and when the surface has stiffened sufficiently to permit the operation.
  - b. Cut down all high spots and fill all low spots and float the slab to a uniform sandy texture.
4. Trowel finish:
  - a. Float finish as specified herein.
  - b. Power trowel to a smooth surface free of defects.
  - c. After the surface has hardened sufficiently, hand trowel until a ringing sound is produced as the trowel is moved over the concrete surface.
5. Broom finish:
  - a. Float finish as specified herein.
  - b. Provide a scored texture by drawing a broom across the surface.
6. Scratch surface:
  - a. Screed the surface to the proper elevations.
  - b. Roughen with rakes or stiff brushes.
7. Edge finish: Tool slab edges and joints with a 1/4" radius edging tool.

### 3.9 SURFACE REPAIR

- A. Patching mortar:
  1. Make a patching mortar consisting of 1 part portland cement to 2-1/2 parts sand by damp loose volume.
  2. Mix the mortar using one part acrylic bonding admixture to two parts water.
- B. Tie holes: Clean and dampen all tie holes and fill solidly with patching mortar.
- C. Surface defects:
  1. Remove all defective concrete down to sound solid concrete.
  2. Chip edges perpendicular to the concrete surface or slightly undercut, allowing no feather edges.
  3. Dampen surfaces to be patched.
  4. Patch defects by filling solidly with repair mortar.
- D. Allow the Engineer to observe the work before placing the patching mortar.
- E. Repair defective areas greater than 1 sq. ft. or deeper than 1-1/2" as directed by the Engineer using materials approved by the Engineer at no additional expense to the Owner.

### 3.10 JOINTS

- A. Construction joints:
  1. Unless otherwise approved by the Engineer, provide construction joints as shown on the drawings.
  2. If additional construction joints are found to be required, secure the Engineer's approval of joint design and location prior to start of concrete placement.
  3. Continue all reinforcing across construction joints and provide 1-1/2" deep keyways unless indicated otherwise on the drawings.
    - a. Form keyways in place.
  4. Provide waterstops in all construction joints of liquid containing structures, structures below grade or other structures as shown on the drawings.

### 3.11 FIELD QUALITY CONTROL

A. Concrete cylinder tests:

1. During construction, prepare test cylinders for compressive strength testing, using 6" diameter by 12" long single use molds, complying with ASTM C31.
  - a. Make a set of three test cylinders from each pour of 50 cubic yards or less, plus one additional set of cylinders for each additional 50 cubic yards or fraction thereof.
  - b. Identify each and tag cylinder as to date of pour and location of concrete which it represents.
  - c. Deliver cylinders to testing lab selected by the Owner.
  - d. Cost for preparation and delivery of cylinders shall be borne by the Contractor. Cost for testing cylinders will be borne by the Owner.
2. Should strengths shown by test cylinders fail to meet specified strengths for the concrete represented, then:
  - a. Engineer shall have the right to require changes in the mix proportions as he deems necessary on the remainder of the work.
  - b. Additional curing of those portions of the structure represented by the failed test cylinders shall be accomplished as directed by the Engineer.
  - c. Upon failure of the additional curing to bring the concrete up to specified strength requirements, strengthening or replacement of those portions of the structure shall be as directed by the Engineer.
  - d. The Engineer may require additional testing of concrete in question by either non-destructive methods such as the Swiss Hammer, Windsor Probe or Ultrasonics or by coring and testing the concrete in question in accordance with ASTM C42. Such testing shall be performed at no additional cost to the Owner.

B. Other field concrete tests:

1. Slump tests: Either the Engineer or a testing laboratory representative will make slump tests of concrete as it is discharged from the mixer.
  - a. Slump test may be made on any concrete batch at the discretion of the Engineer.
  - b. Failure to meet specified slump requirements (prior to addition of any superplasticizers) will be cause for rejection of the concrete.
2. Temperature: The concrete temperature may be checked at the discretion of the Engineer.
3. Entrained air: Air content of the concrete will be checked by a representative of the testing laboratory at the discretion of the Engineer.

C. Coordination of laboratory services: The Contractor shall be responsible for coordination of laboratory services.

1. Maintain a log recording quantities of each type of concrete placed, date and location of pour.
2. Inform the testing laboratory of locations and dates of concrete placement and other information as required to be identified in the laboratory's test reports.

D. Tests required because of extensive honeycombing, poor consolidation of the concrete or any suspected deficiency in the concrete will be paid for by the Contractor.

E. Dimensional tolerances:

1. Dimensional tolerances for allowable variations from dimensions or locations of concrete work, including the locations of embedded items shall be as given in ACI 301.

2. Where anchor bolts or other embedded items are required for equipment installation, comply with the manufacturer's tolerances if more stringent than those stated in ACI 301.

F. Watertight concrete:

1. All liquid containing structures, basements or pits below grade shall be watertight.
2. Any visible leakage or seepage shall be repaired as instructed by the Engineer at no expense to the Owner.
3. Where physical evidence of honeycombing, cold joints or other deficiencies which may impair the watertightness of a structure exists, the Engineer may at his discretion call for leak testing of the structure.
  - a. Fill the structure with water and allow to stand for not less than 48 hours.
  - b. Make repairs on the structure until all visible leaks are sealed and the leakage rate of the water in the structure is less than 0.1% of the volume held in the structure per day.
  - c. The cost of testing and repairs shall be performed at no expense to the Owner.

- G. Concrete which fails to meet strength requirements, dimensional tolerances, watertightness criteria, or is otherwise deficient due to insufficient curing, improper consolidation or physical damage shall be replaced or repaired as instructed by the Engineer at no expense to the Owner.

### 3.12 MEASUREMENT AND PAYMENT

- A. No measurement or direct payment will be made for the work under this Section and all costs for same shall be included in the price bid for the item in which the concrete work is an integral part.

**END OF SECTION 02560**

**SECTION 02600**  
**WATER UTILITY**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Work included: Provide water system relocations as required and as shown on the Drawings, specified in the drawing standard notes, per Georgetown County Water & Sewer District standards and regulations, and as needed for a complete and proper installation.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these specifications.

**1.2 QUALITY ASSURANCE**

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. All materials and installation methods are to conform with the standards of Georgetown County Water and Sewer District.

**1.3 SUBMITTALS**

- A. Comply with pertinent provisions of Division 1.

**1.4 PRODUCT HANDLING**

- A. Comply with pertinent provisions of Division 2.
- B. Shipment of pipe:
  - 1. Protect pipe with tarp or other means during shipment to prevent truck exhaust from damaging pipe.
- C. Avoid severe impact blows, gouging or cutting by metal surfaces or rocks.

## **END OF SECTION 02600**

### **SECTION 02700**

#### **SANITARY SEWER UTILITY**

##### **PART 1 - GENERAL**

###### **1.1 DESCRIPTION**

- A. Work included: Provide sanitary sewer relocations as required and as shown on the Drawings, specified in the drawing standard notes, per Georgetown County Water & Sewer District standards and regulations, and as needed for a complete and proper installation.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these specifications.

###### **1.2 QUALITY ASSURANCE**

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. All materials and installation methods are to conform with the standards of Georgetown County Water and Sewer District.

###### **1.3 SUBMITTALS**

- A. Comply with pertinent provisions of Division 1.

###### **1.4 PRODUCT HANDLING**

- A. Comply with pertinent provisions of Division 1.
- B. Storage of PVC pipe:
  - 1. Store in unit packages as received from manufacturer until just prior to use.
  - 2. Stack units in such a manner as to prevent deformation to pipe barrel and bells.
  - 3. Protect from direct sunlight by covering with opaque material if storage period will exceed six weeks.
- C. Avoid severe impact blows, gouging or cutting by metal surfaces or rocks.

###### **1.5 PROTECTION OF OTHER UTILITIES**

- A. Location:
  - 1. Approximate location of certain known underground lines is shown.
  - 2. Existing small lines not shown.
  - 3. Locate small and other possible utility lines using electronic pipe finder, or other approved method.
  - 4. Excavate and expose existing underground utilities ahead of trenching operations.
- B. Repair or replace any damaged utility line or structure at no additional cost to Owner.

#### 1.6 CONFLICTING UTILITIES

- A. Remove and/or relay conflicting utilities, when so directed by the Engineer, at the expense of the Owner.
- B. Where alterations to existing utilities are shown to avoid conflicts, make alterations at no cost to Owner.

#### 1.7 JOB CONDITIONS

- A. Work under this Section may require construction or work in a confined space, defined as any space having one or more of the following characteristics:
  - 1. Limited openings for entry and exit.
  - 2. Unfavorable natural ventilation.
  - 3. Not designed for continuous worker occupancy.
- B. The Contractor shall have on the job site at all times the following minimum safety equipment:
  - 1. Gas monitor capable of testing and detecting for combustible gas, oxygen deficiency and hydrogen sulfide.
  - 2. Confined space access and retrieval winch system.
  - 3. Ventilating fan with large diameter ventilating hose.
  - 4. Supplied air respirator, MISHA/NIOSH approved type.
  - 5. Safety harness and lifelines.

This equipment to be available for use by the Contractor, Engineer and Owner for the duration of the project.

- C. All entries into or work within confined spaces to be conducted in accordance with the U.S. Department of Health and Human Services/National Institute for Occupational Safety and Health [DHHS (NIOSH)] Publication No. 87-113, A Guide to Safety in Confined Spaces.

**END OF SECTION 02700**

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## **SECTION 02740**

### **RIPRAP AND SLOPE PROTECTION**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary riprap and slope protection as shown on the plans and specified in SCDOT Technical Specification SC-M-804.

#### **PART 2 - PRODUCTS**

Refer to SCDOT Technical Specifications

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02740**

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## **SECTION 02800**

### **SEEDING**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

Scope of Work: The work consists of all necessary seeding as shown on the plans and specified in SCDOT Technical Specification SC-M-810.

#### **PART 2 - PRODUCTS**

##### **2.1 SEED**

- D. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- E. Seed Species: See seeding schedule on drawings.

#### **PART 3 - EXECUTION**

Refer to SCDOT Technical Specifications

**END OF SECTION 02800**

**END OF**

**DIVISION 2 – TECHNICAL SPECIFICATIONS**

**AND**

**PROJECT MANUAL**

