

**PROJECT MANUAL
FOR
BRICK CHIMNEY ROAD
IMPROVEMENT PROJECT**

BID NO.20-001



**GEORGETOWN COUNTY,
SOUTH CAROLINA**

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

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

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**DAVIS & FLOYD ENGINEERS
DAVIS & FLOYD**

SINCE 1954

DATE: 07/01/2020

VOL. I PROJECT MANUAL

DATE: 07/01/20

TABLE OF CONTENTS

DIVISION 0- BIDDING AND CONTRACT DOCUMENTS

<u>Section No.</u>	<u>Title</u>	<u>Page</u>
00010	Invitation for Bid.....	6
00100	Instructions to Bidders.....	10
00200	<u>Optional Forms</u>	
	Intent to Respond.....	23
	Material Substitution Request.....	24
	Release and Indemnification Agreement for Electronic Media (CADD file requests).....	26
00300	<u>Mandatory Forms</u>	
	Exhibit A Bid Form.....	27
	Exhibit B Acknowledgement of Addenda.....	33
	Exhibit C Non-Collusion Affidavit.....	34
	Exhibit D IRS Form W-9.....	35
	Exhibit E Indemnification.....	36
	Exhibit F List of Prime & Subcontractors.....	37
	Exhibit G Statement of Experience.....	38
	Exhibit H Unit Price Schedule.....	39
	Exhibit I Resident Certification for Preference.....	43
	Exhibit J Exceptions Page Form.....	45
00400	Bid Bond.....	46
00500	Sample Contract.....	48
00600	Performance Bond.....	54
00601	Labor and Material Payment Bond.....	56
00750	Summary Schedule and Key Milestones.....	58
00800	Special Project Conditions.....	59
00900	List of Drawings.....	61

DIVISION 1 - GENERAL REQUIREMENTS

<u>Section No.</u>	<u>Title</u>	
01100	Summary of Work.....	63
01290	Payment Procedures.....	66
01300	Regulatory Requirements.....	70
01310	Project Management and Coordination.....	72
01315	Progress Meetings.....	74
01320	Construction Progress and Documentation.....	75
	1.12 Rain Delays.....	80
01322	Photographic Documentation.....	82
01330	Submittal Procedures.....	84
01331	Schedule of Values.....	88
01400	Quality Requirements.....	90

01410	Testing Laboratory Services.....	92
01500	Temporary Facilities and Utilities.....	96
01510	Temporary Construction Controls.....	99
01530	Barriers.....	102
01563	Handling of Incidental Fuel Spillage.....	104
01570	Traffic Regulation.....	106
01600	Product Requirements.....	109
01610	Materials and Equipment.....	112
01620	Storage and Protection.....	118
01700	Execution Requirements.....	120
01770	Closeout Procedures.....	123
01781	Project Record Documents.....	128
01790	Warranties and Bonds.....	131

VOL. II PROJECT MANUAL

DIVISION 2 – TECHNICAL SPECIFICATIONS

Section No. Title

SPECIAL PROVISIONS133

(1)	REFERENCES:	133
(2)	STANDARDS AND REFERENCES:	133
(3)	ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION:.....	133
(4)	SUBMITTALS:	134
(5)	MANUFACTURERS MATERIALS CERTIFICATIONS AND CERTIFIED TEST REPORTS:.....	134
(6)	REQUIRED MEDIA NOTIFICATION FOR CONSTRUCTION PROJECTS:.....	134
(7)	AS-BUILT CONSTRUCTION PLANS:	135
(8)	SECTION 101: STANDARD DRAWINGS:	135
(9)	SECTION 102: IMMINENT STANDARD DRAWINGS:	135
(10)	SECTION 102: STANDARD DRAWING ERRATA:.....	135
(11)	SECTION 103.8: CONTRACTOR'S LIABILITY INSURANCE:	138
(12)	SECTION 105: CONSTRUCTION STAKES, LINES, AND GRADES:	138
(13)	SECTION 106: QUALIFIED PRODUCT LISTINGS	139
(14)	SECTION 106: SOUTH CAROLINA MINING ACT:	139
(15)	SECTION 107: FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED:	139
(16)	SECTION 107: CRANE SAFETY:.....	139
(17)	SECTION 107: LATE DISCOVERY OF ARCHAEOLOGICAL/HISTORICAL REMAINS ON FEDERAL AID PROJECTS AND APPROVAL OF DESIGNATED BORROW PITS:	139
(18)	SECTION 107: CONTRACT PROVISION TO REQUIRE CERTIFICATION AND COMPLIANCE CONCERNING ILLEGAL ALIENS.....	140
(19)	SECTION 107: COORDINATION OF UTILITY RELOCATION WORK WITH HIGHWAY CONSTRUCTION:	140
(20)	UTILITY ALLOWANCE.....	140
(21)	SECTION 108: CONSTRUCTION SCHEDULES:.....	140
(22)	SECTION 108: NOTICE TO PROCEED	140
(23)	CONSTRUCTION ESTIMATES	141
(24)	SECTION 109: RETAINAGE	141
(25)	INSTALL PIPE AND BOLLARD DESIGN DOUBLE GATE	141
(26)	HAUL ROUTE DETAILS	141
(27)	SECTION 203: MUCK EXCAVATION	141
(28)	SECTION 208: FINE GRADING.....	142
(29)	SECTION 400: ASPHALT BINDER AND ADDITIVES:	142

(30)	SECTION 401: REMOVAL OF EXISTING ASPHALT PAVEMENT BEFORE PATCHING.....	142
(31)	SECTION 401: ASPHALT BINDER ADJUSTMENT INDEX:	142
(32)	SECTION 401: TRANSPORTATION AND DELIVERY OF MIXES:	142
(33)	SECTION 600: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES:.....	142
(34)	SECTION 600: TRAFFIC CONTROL HOLIDAY LANE RESTIRCTIONS:	143
(35)	SECTION 600: ROADWAY CLOSURES	143
(36)	SECTION 600, ET AL.: ADHESIVELY BONDED ANCHORS AND DOWELS:	143
(37)	SECTION 600: TRAILER MOUNTED AUTOMATED FLAGGER ASSISTANCE DEVICE SYSTEM (AFAD):.....	144
(38)	SECTION 600: WORK ZONE TRAFFIC CONTROL TRAINING REQUIREMENTS FOR CONTRACTORS / SUBCONTRACTORS:	144
(39)	REMOVING STOP CONTROL AT BRICK CHIMNEY AND JOHNSON RD:.....	144
(40)	SECTION 600: TRAFFIC CONTROL	145
(41)	SECTION 605: PERMANENT CONSTRUCTION SIGNS:	149
(42)	SECTION 610: ASSISTANCE BY HIGHWAY PATROL AND LOCAL LAW ENFORCEMENT:.....	149
(43)	SECTION 701: CONCRETE BATCHING AND MIXING:.....	149
(44)	SECTION 701: CONCRETE BATCHING AND MIXING IN COLD AND HOT WEATHER:.....	149
(45)	SECTION 701: PORTLAND CEMENT AND PORTLAND CEMENT CONCRETE:	149
(46)	SECTION 702: CONCRETE STRUCTURES – PREFORMED JOINT FILLER:	149
(47)	SECTION 703: REINFORCING STEEL:.....	150
(48)	SECTION 714: SMOOTH WALL PIPE.....	150
(49)	SECTION 720: CONCRETE MEDIAN/ISLANDS	150
(50)	SECTION 809: RIGHT OF WAY PLAT:	150
(51)	SECTION 815: EROSION CONTROL MEASURES:	151
(52)	GRADATION OF FINE AGGREGATE FA-10M:	151
(53)	PROMPT PAYMENT CLAUSE:	151
(54)	GEORGETOWN COUNTY WATER AND SEWER DISTRICT:.....	151
(55)	IP CANAL REQUIREMENTS:.....	152

SUPPLEMENTAL SPECIFICATIONS.....153

ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.....	153
SOUTH CAROLINA MINING ACT	158
ASULT CONSTRUCTION PLANS	160
LATE DISCOVERY OF ARCHAEOLOGICAL/HISTORICAL REMAINS ON FEDERAL AID PROJECTS AND APPROVAL OF DESIGNATED BORROW PITS	160
CRANE SAFETY	162
REQUIREMENTS FOR FEDERAL AID CONTRACTS WHICH AFFECT SUBCONTRACTORS, DBE HAULERS, MATERIAL SUPPLIERS AND VENDORS	164
LATE DISCOVERY OF ARCHAEOLOGICAL/HISTORICAL REMAINS ON FEDERAL AID PROJECTS AND APPROVAL OF DESIGNATED BORROW PITS	164
CONSTRUCTION SCHEDULES.....	165
CONSTRUCTION ESTIMATES.....	178
ASPHALT BINDER ADJUSTMENT INDEX.....	179
FINE GRADING	181
ASPHALT BINDER AND ADDITIVES	182
REMOVAL OF EXISTING ASPHALT PAVEMENT BEFORE PATCHING	185
TRANSPORTATION AND DELIVERY OF MIXES.....	186
TRAFFIC CONTROL	187
ADHESIVELEY BONDED ANCHORS AND DOWELS.....	190
AUTOMATED FLAGGER ASSISTANCE DEVICE SYSTEM (AFAD).....	195
TRAINING REQUIREMENTS FOR CONTRACTORS / SUBCONTRACTORS)	202
ASSISTANCE BY HIGHWAY PATROL AND LOCAL LAW ENFORCEMENT	206
CONCRETE BATCING AND MIXING IN COLD AND HOT WEATHER.....	207
CONCRETE BATCHING AND MIXING.....	209
PORTLAND CEMENT AND PORTLAND CEMENT CONCRETE.....	210
CONCRETE STRUCTURES – PERFORMED JOINT FILLER.....	211

REINFORCING STEEL.....	212
EROSION CONTROL MEASURES	217
GRADATION OF FINE AGGERGATES FA-10M	219
PROMPT PAYMENT CLAUSE.....	220
UTILITY ALLOWANCES	221

END OF TABLE OF CONTENTS

SECTION 00010

INVITATION FOR BID

Time Line: Invitation for Bid #20-001

Item	Date	Time	Location
Advertised Date of Issue:	Wednesday, July 1, 2020	n/a	n/a
VOLUNTARY Pre-Bid Meeting:	Tuesday, July 14, 2020	10:00AM ET	Virtual
Pre-Bid Site Inspection:	INDEPENDENT-ON OWN	n/a	n/a
Inquiry Cut-Off Time:	Wednesday, August 5, 2020	3:00PM ET	n/a
Bid Delivery Cut-Off Time:	Thursday, August 20, 2020	3:00PM ET	Electronic
*Bid Opening and Tabulation:	Thursday, August 20, 2020	3:00PM ET	Virtual
County Council Consideration (Tentative)	Tuesday, September 8, 2020	5:30pm ET	TBD
Earliest Possible Notice to Proceed:	Monday, September 21, 2020	n/a	n/a
Final Completion:	639 Calendar Days from NTP	n/a	n/a

*Due to the current COVID-19 situation, County offices at the time of this bid posting remain open but access to the public may be limited to support social distancing efforts. At the time of this posting, bid openings are being performed virtually and may occur from an alternate secure and/or remote location as needed. A virtual meeting link will be posted under the bid number before the bid opening time so that members of the public may attend the meeting virtually.

**BRICK CHIMNEY ROAD IMPROVEMENT PROJECT
GEORGETOWN, SOUTH CAROLINA
BID #20-001**

IMPORTANT COVID-19 NOTICE: Until further notice all bids MUST BE submitted electronically through the Purchasing Department’s Vendor Registry webpage. Please click on the following link <http://www.georgetowncountysc.org/purchasing/default.html> for instructions on how to submit bids electronically through this system. As always, emailed/faxed bids will not be accepted. Your bid must be submitted electronically through Georgetown County's Purchasing Vendor Registry page to ensure it remains sealed until the scheduled bid opening date and time.

Any scheduled bid openings will still be opened at the designated date and time as listed in the bid document or related addendum. However, at the time of this bid issuance these bid openings will be conducted virtually. As always, bid openings will be accompanied by at least one witness and bid tabulation results will be posted online for the public’s viewing after the bid opening.

Purchasing Contacts:	Nancy Silver	Pamela Bassetti
Phone	(843)545-3076	(843)545-3082
Fax:	(843)545-3500	(843)545-3500
E-mail:	nsilver@gtcounty.org	pbassetti@gtcounty.org

1) **Scope of Work:**

BASE BID:

The Brick Chimney Road project will include realigning and paving approximately 2.5 miles of existing Brick Chimney Road from Johnson Road (S-318) to Browns Ferry Road (SC 51). This project will include a 55 LF proposed bridge with AASHTO Type 1 Mod Beams over

International Paper's Canal (IP Canal). The roadway will include two paved 12-foot lanes, 10-foot shoulders with a minimum of 2 feet of the shoulder paved and roadside ditches. Intersection improvements of Brick Chimney Road at Johnson Road will include roadway widening and a raised median. The intersection of Brick Chimney Road will be widened and relocated along Browns Ferry Road and will include a raised median. Browns Ferry Road will be widened to add left and right turn lanes at Brick Chimney Road. Georgetown County Water & Sewer District has included plans for water line and force main relocations. All other utility relocations will need to be coordinated by the Contractor with the respective utility companies. The County has acquired all necessary Right-of-way. Permits have been obtained for the roadway construction from USACE, SCDHEC, SCDOT and Georgetown County Stormwater and are available for download under the bid information.

Allowances: There will be a \$30,000 utility allowance for this project. Work associated with the separate bound plans for Georgetown County Water and Sewer District shall not be included in the Allowance Item. See Volume II, Utility allowances section for more information.

Retainage, in the amount of ten percent (10%) of the value of construction costs incurred for the project, shall be withheld until the project has been completed to the satisfaction of Owner.

- 2) Due to COVID-19, a **VOLUNTARY Pre-Bid Meeting** will be held virtually on **Tuesday, July 14, 2020 at 10:00 AM** Eastern Time to help answer any questions bidders may have. See link and dial information provided for the pre-bid meeting below. An addendum will be issued after the pre-bid meeting with the County's official responses. Each Contractor will be responsible to make their own independent inspection of the site and project areas before the deadline for bid submissions. By submitting a bid, the Contractor will be certifying that they have inspected the site. See the following Site Inspection section for further information.

Pre-Bid Meeting-Bid #20-001, Brick Chimney Road Improvement Project
Tue, Jul 14, 2020 10:00 AM - 11:30 AM (EDT)

Please join my meeting from your computer, tablet or smartphone.

<https://www.gotomeet.me/GeorgetownCountyPurchasing/new-meeting>

You can also dial in using your phone.

United States: [+1 \(224\) 501-3412](tel:+12245013412)

Access Code: 820-647-309

New to GoToMeeting? Get the app now and be ready when your first meeting starts:

<https://global.gotomeeting.com/install/820647309>

- 3) 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.

4) Bid Security/Bid Bonding:

- a) 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 of Contract. Bids not including such a bid bond will not be considered. Any certified checks received will be returned to unsuccessful vendors after award of Bid.
- b) The successful proposer 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 the after receipt of written notice of formal award of the Contract.
- c) 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.
- d) Should any Surety on the Construction Contract be determined unsatisfactory at any time

by the Owner, notice will be given the Contractor who shall immediately provide a new Surety, satisfactory to the Owner and at no additional cost to the Owner. The Contract shall not be operative nor will any payments be due or paid until approval of the bonds has been made by the Owner.

- e) The Bidder shall require the Attorney-in-Fact who executes the required bonds, on behalf of the Surety, to affix thereto a certified and current copy of his Power of Attorney, indicating the monetary limit of such power.
- f) The cost of the bonds shall be included in the construction portion of the base bid.

5) 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.
- 6) 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.

Throughout this Project Manual all references to the "Owner" shall mean the County of Georgetown, SC or its Designated Representative.

END OF SECTION 00010

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SECTION 00100

INSTRUCTIONS TO BIDDERS BRICK CHIMNEY ROAD IMPROVEMENT PROJECT Bid# 20-001

These are general instructions and conditions that accompany each bid package. If more specific instructions are given in the individual bid package, those instructions should prevail.

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 six (6) 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:**

Nancy Silver, Purchasing Officer
Post Office Box 421270, Georgetown, SC 29442-4200
Fax: (843) 545-3500
Email: nsilver@gtcounty.org

2. Electronic sealed bids for to provide BRICK CHIMNEY ROAD IMPROVEMENT PROJECT shall be received via the County’s Vendor Registry webpage until the cut-off time shown in the bid timeline on page six (6) of this document. Bids will then be promptly opened at the designated time by the Buyer. Bids that are not received prior to the stated opening date and time will be considered **NON RESPONSIVE**. An official authorized to bind the offer must sign all proposals submitted.
3. **Inclement Weather/Closure of County Courthouse**
Due to the current COVID-19 situation, County offices at the time of this bid posting remain open but are limited to the public. Bid openings may occur from an alternate secure and/or remote location as needed.
4. 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.

5. **NON EXCLUSIVITY**

Nothing herein is intended nor shall be construed as creating any exclusive arrangement with Contractor. Any resulting contract shall not restrict the County from acquiring similar, equal or like goods and/or services from other entities or sources, when Staff determines internally that this resulting action is in the best interest of Georgetown County.

6. No Bidder may submit more than one bid. Multiple bids for 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.

7. Definitions:

a) The terms “Proposer”, “Offeror”, “Vendor” or “Bidder” refer to those parties who are submitting sealed responses 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 “BRICK CHIMNEY ROAD IMPROVEMENT PROJECT” or “the Work” 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.

8. Bidders must be licensed as a General Contractor in the State of South Carolina and will hold all Trade Contracts and the Building Permit on the Project.

7. Trade Contractors (Prime and sub-contractors) shall be qualified to perform the work contracted for and shall be licensed as such in the State of South Carolina.

8. Design services shall be performed by qualified architects and engineers licensed to perform the contracted work in the State of South Carolina.

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) 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.

- b) 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. Electronic bid submissions must be submitted through the Georgetown County Purchasing Vendor Registry page to ensure they remain sealed until the scheduled bid opening date and time.

- 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. Title VI of the Civil Rights Act of 1964: 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.gtcountry.org/about/faqs.html>.
- 13. 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.
- 14. 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".
- 15. Georgetown County reserves the right to reject any or all bids, and to waive as an informality any irregularities contained in any bid 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.

16. 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.
17. 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.
18. 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.
19. 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.
20. 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.
21. Inclusion and participation of disadvantaged, small, and local business entities is strongly encouraged, but minimum participation standards are not in effect for this project.
22. All Federally Funded or Assisted Construction Contracts Over \$2,000:
 - a) Davis-Bacon Requirements. These contracts need to include a provision for compliance with the Davis-Bacon Act (40 USC 276a to a—7) and the Department of Labor implementing regulations (29 CFR Part 5). Under this Act, Contractors are required to include the contract provisions in Section 5.5 (a) of 29 CFR Part 5, and to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in the wage determination made by the Secretary of Labor. In addition, Contractors shall be required to pay wages not less than the minimum wages specified in the wage determination made by the Secretary of Labor. In addition, Contractors shall be required to pay wages not less often than once a week. Current Wage Determination for Georgetown County in South Carolina is available on-line at: https://beta.sam.gov/search?index=wd&keywords=Georgetown&sort=-relevance&wdType=dbra&page=1&date_filter_index=0&inactive_filter_values=false
 - b) Contract Work Hours and Safety Standard Act Requirements. The contracts must include a provision for compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by the Department of Labor regulations (29

CFR Part 5). Under Section 103 of the Act, each Contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of 40 hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate not less than one times the basic rate of pay for all hours worked in excess of 40 hours in the workweek. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to health and safety as determined under construction, safety and health standards promulgated by the Secretary of Labor. These requirements do not apply to the purchases of supplies, materials, or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

- c) Copeland "Anti-Kickback" Act Requirements. All construction contracts over \$2,000.00 must include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3). This act provides that each Contractor shall be prohibited from inducing, by any means, persons employed in the construction, completion, or repair of public work to give up any part of their compensation.

23. 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.

24. Certification of Non-Segregated Facilities

The federally-assisted construction contractor certifies that he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally assisted construction contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that he will retain such certifications in his files.

25. 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.

26. 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.

27. Acknowledgement of Addenda

Each contractor is responsible to verify the number of total addenda issued prior to bid. **Failure to acknowledge all addenda may disqualify the bidder.** All addenda are posted by the County at the website located at www.georgetowncountysc.org, select “Purchasing” and “Current Bids”. It is each proposer’s responsibility to verify that all addenda have been received and acknowledged.

28. This Invitation for Bid covers the estimated requirements to provide BRICK CHIMNEY ROAD IMPROVEMENT PROJECT for the Georgetown County Stormwater and Capital Projects Divisions. The purpose is to establish a Construction Contract with firm pricing and project schedule.

29. 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.

30. 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

Policy will be in name of County. Minimum limits required are \$1,000,000.

e. Professional Liability (a/k/a Errors and Omissions)

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.

31. 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#empl>

32. [Not Used]

33. 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.

34. 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.

35. 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.

36. Progress Payments (If Applicable)

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 thirty (30) days from receipt of the Application for Payment by the Owner.

37. South Carolina Sales Tax

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

38. Assignment of Contract

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

39. Termination

Subject to the provisions below, the contract may be terminated by the County upon sixty (60) 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 sixty (60) 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 sixty (60) 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.

40. 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.

41. 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.

42. Applicable Laws

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

43. 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.

44. 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.

45. Award of Bid

In determining the lowest responsive and responsible bidder, in addition to price, there shall 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.

46. Notice of Award

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

47. 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.

48. 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. A copy of the County's debarment procedure in accordance with Section 2-68 of Ordinance #2008-09, also known as the Georgetown County, South Carolina Purchasing Policy is available upon request.

49. Firm Pricing for County Acceptance

Bid price must be firm for County acceptance for 90 days from bid opening date.

50. 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 be cause for removal from bid list.

51. BRAND NAME OR EQUAL:

- a) The use of a "Brand Name Only" specification is for the purpose of describing the sole item that will satisfy the county's requirements. Bids offering alternate products will be declared non-responsive.
- b) The use of a "Brand Name Or Equal" specification is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition. An item shall be considered to be substantially equivalent, or "equal" to the specified brand in the opinion of

the Chief Procurement Officer, the County can reasonably anticipate sufficiently similar quality, capacity, durability, performance, utility and productivity as provided by the specified brand.

c) The use of a “Brand Name Or Pre-Approved Equal” specification with a reference to a brand name or model number does not preclude an offer of a comparable or better product, if full specifications and descriptive literature are provided for the product. Bidder shall submit a Material Substitution Request form for a proposed equal to Purchasing by the date and time listed in the bid solicitation to allow Owner to make a determination of equality to the brand specified. If Owner approves the proposed equal, an addendum to the bid will be issued specifically identifying the item as a pre-approved equivalent. Failure to provide such specifications and descriptive literature may be cause for rejection of the offer.

52. 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.

53. 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 “Bid Opportunities” from the Quick Links box, then “Bids Under Review” and double click the link under the individual bid listing.

54. 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.

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. 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.

58. 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 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.

59. Substitutions and Product Options

Written requests for changes in products, materials, equipment and methods of construction required by the Contract Documents shall be submitted to the Owner prior to bidding in accordance with the timeline provided

and using the Material Substitution Request form provided and in accordance with *The Project Manual, Division 1, Section 01600*.

60. Bidding Documents

- a) Each Bidder shall carefully examine the Bidding and Contract Documents, General Requirements, Drawings and Technical Specifications and all addenda or other revisions and thoroughly familiarize themselves with the detailed requirements prior to submitting a Bid. Bidders shall promptly notify the Owner in writing of any ambiguity, inconsistency, error or omission, which they may discover upon examination of the Bidding and Contract Documents, Project Site and / or local conditions. The Owner shall make such interpretations, corrections or changes to the Bidding Documents and will reply to all questions submitted by the Bidders. The Owner will log all responses and issue an addendum as may be appropriate. The Owner will not be responsible for any oral instructions and / or responses. Interpretations, corrections or changes made in any other manner will not be binding. All addenda sent to Bidders will become a part of the Bidding and Contract Documents. All inquiries shall be directed in writing or transmitted by facsimile to the office of the Owner. No allowance will be made after Bids are received due to oversight and / or error by bidder.
- b) Each Bidder shall carefully review the Table of Contents and the List of Drawings in the Project Manual to determine if any instrument is missing from the Bidding Documents. Bidders shall promptly notify the Owner, in writing, of any discrepancy.
- c) Addenda will not be mailed or faxed to all Bidders. Copies of Addenda will be made available through the County website. Prior to submitting a Bid each Bidder shall ascertain that he/she has received all Addenda issued.
- d) Owner does not assume any responsibility for errors, omissions or misinterpretations resulting from the Bidder's use of incomplete Bidding Documents.

61. Liquidated Damages

Refer to *The Project Manual, Division 1, Section 01100, Summary, Section 1.07 Liquidated Damages*.

62. Retainage

Retainage in the amount of ten percent (10%) of the value of construction costs incurred for the project, shall be withheld until the project has been completed to the satisfaction of Owner.

END OF SECTION 00100

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SECTION 00200

Intent to Respond

REF: **Bid #20-001, BRICK CHIMNEY ROAD IMPROVEMENT PROJECT**

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 non-responsive; 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.gtcounty.org select Quick Links, "Bid Opportunities" and "View Current Bid Solicitations".

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

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

Company Name: _____

Address: _____

Contact Person: _____

Telephone: _____

FAX: _____

E-Mail: _____

Reason if **not** responding: _____

Please return this completed form to Nancy Silver, Purchasing Officer:

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

[End of Intent to Respond]



MATERIAL SUBSTITUTION REQUEST

Bid #20-001, BRICK CHIMNEY ROAD IMPROVEMENT PROJECT

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:

E) Difference between proposed PRODUCT SUBSTITUTION and the Specified Product? BE SPECIFIC IN DESCRIPTION. (ASTM No., Size, Gauge, Material, Color Availability, Construction)

(Attach additional pages as required)

F) Manufacturer's guarantees and warranties of the PRODUCT SUBSTITUTION and the Specified Product?

Same Different (Explain)

G) What is the cost differential of the PRODUCT SUBSTITUTION in comparison to the Specified Product?

Same Less Expensive by \$ _____ More Expensive by \$ _____

I) The PRODUCT SUBSTITUTION has been verified by the undersigned with the Manufacturer/Supplier as meeting or exceeding the specifications of the Specified item.

Yes No Waiting for answer.

THE UNDERSIGNED Trade Contractor states that the function, appearance, and quality of the PRODUCT SUBSTITUTION are equivalent or superior to the specified item. In addition, I, as the Trade Contractor will assume all responsibility for any impact or delay the review and evaluation of the alternate product may cause. Your approval of the Substitute Product in no way will relieve me as the Trade Contractor of my responsibilities to conform with all requirements of the Contract Documents.

Submitted By: _____
Signature Printed

FOR USE BY ARCHITECT/ENGINEER:

RECEIVED TOO LATE NOT ACCEPTED APPROVED AS NOTED

FOR BIDDING ONLY, FINAL APPROVAL SUBJECT TO SUBMITTAL DATA IN ACCORDANCE WITH REQUIREMENTS OF CONTRACT DOCUMENTS.

DATE: _____

PRINTED NAME: _____

SIGNATURE: _____

RELEASE AND INDEMNIFICATION AGREEMENT
FOR ELECTRONIC MEDIA (CADD File Requests)

THIS AGREEMENT is entered into among Davis & Floyd, Inc. as “Consultant” and _____ as “Client”.

Consultant has been requested to provide ELECTRONIC MEDIA related to the Project known as:
BRICK CHIMNEY ROAD IMPROVEMENT PROJECT.

The delivery of this information in electronic format is for the benefit of the Client for whom the services have been performed. This delivery constitutes a nonexclusive, limited license for the recipient to use the information in the electronic file for the specific purpose of responding to the requirements of the Client on this Project. Nothing in this transfer should be construed to create any right of the user to rely on the information provided or that the use of this electronic information implies the review and approval by the Consultant. Any use of this information is at the sole risk and liability of the user who retains the responsibility for updating the information to reflect any changes following the preparation date of this information.

Consultant makes no performance guarantees, express or implied warranties, and assumes no obligation or liability for the reliability or accuracy of the information contained herein; or for the accuracy of the information translated by Consultant’s software for use with the end users’ software. Moreover, any reuse of electronically stored documents imports a significant risk of error and misinterpretation through corruption of data, incompatibilities of computer programs, intentional manipulation, and the like. Consultant makes no representations as to long term compatibility, usability, or readability of documents resulting from use of software application packages, operating systems, or computer hardware differing from those used by Consultant. Consultant assumes no liability for the hardware or software damage that may result from the use of the electronic files provided on disk, or by electronic transfer due to unknown viruses that may reside on the electronic media when transferred to the end user.

The information contained in the signed and sealed documents should be deemed to be correct and superior to this electronic information. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

NOW, THEREFORE, in consideration of the voluntary release of the electronically stored documents for this Project and contingent upon receipt of those documents, Client and, if applicable, Other party(s), jointly and severally, hereby release and hold harmless the Consultant, its principals, agents, and employees, from any and all liability or responsibility to any person or entity arising out of any use of the electronic documents or any data derived there from.

For Client _____:

For Davis & Floyd, Inc.:

signature

signature

printed name & title

printed name & title

Date _____

Date _____



SECTION 00300
“EXHIBIT A” - BID FORM
MANDATORY BID SUBMITTAL FORM

For: **Bid #20-001, BRICK CHIMNEY ROAD IMPROVEMENT PROJECT**

To: **MAILING ADDRESS:**
 County of Georgetown
 Post Office Drawer 421270
 Georgetown SC 29442-4200
 Attn: Purchasing

STREET ADDRESS:
 Georgetown County Courthouse
 129 Screven Street, Suite 239
 Georgetown SC 29440-3641
 Attn: Purchasing

Name of Company Submitting Bid: _____

The undersigned, having visited the site of the Work and having familiarized themselves with local conditions affecting the design and cost of the work and with all requirements of the proposed 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.

1) **ROADWAY TOTAL:**

_____ \$ _____
 (words shall govern)

2) **BRIDGE TOTAL:**

_____ \$ _____
 (words shall govern)

3) **LANDSCAPING TOTAL:**

_____ \$ _____
 (words shall govern)

4) **GCWSD UTILITY RELOCATION TOTAL:**

_____ \$ _____
 (words shall govern)

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

_____ \$ _____
 (words shall govern)

6) 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 (10%) total for overhead and profit on work performed by the Contractor’s own forces and (15%) total on work by Subcontractors.

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

- 8) **LIQUIDATED DAMAGES:** Liquidated damages for this project shall be \$1,400.00 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, 1.07 Liquidated Damages.*
- 9) 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 Proposer and 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.
- 10) The undersigned, when notified of the acceptance of this Bid, 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.
- 11) 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 of Award 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.
- 12) 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.
- 13) 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.
- 14) The undersigned attaches hereto a cashier's check, certified check or Bid Bond in the sum five percent (5%) of the total base bid payable to Georgetown County, as required in the Request for Bids, 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 or 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.
- 15) 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.

- 16) 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 contractor or subcontract shall be awarded to any non-complying prime contractor and/or subcontractor.
- 17) 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.
- 18) The undersigned affirms that he / she has completed all of the blank spaces in the Bid 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.
- 19) 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".
- 20) **REQUIRED FORMS:** There are specific forms required to be completed and submitted as part of the response to this Invitation for Bids (IFB). The omission, whether inadvertent or not, of any one or more of these forms may cause the Bidder's response to be disqualified. The following forms identified as Exhibits to this IFB, shall be included in the response:

Exhibit A	Bid Form
Exhibit B	Acknowledgement of Addenda
Exhibit C	Non-Collusion Affidavit
Exhibit D	IRS Form W-9
Exhibit E	Indemnification
Exhibit F	List of Prime & Subcontractors
Exhibit G	Statement of Experience
Exhibit H	Unit Price Schedule
Exhibit I	Resident Certification for Preference
Exhibit J	Exceptions Page Form
Bid Bond	5% of total base bid

21) Project Mgr/NTP Contact Address: _____

22) Project Mgr/NTP Contact Person: _____

23) Telephone Number: _____ Fax Number : _____

24) E-Mail address _____

25) Remittance Address: _____

26) A/P Accounting Contact: _____

27) Telephone Number _____ Fax Number: _____

28) E-Mail address: _____

29) Suspension and Debarment

Federal guidelines require grant recipients to obtain sufficient assurance that vendors are not suspended or debarred from participating in federal programs when contracts exceed \$25,000. By signing below you verify that no party to this agreement is excluded from receiving Federal contracts, certain subcontracts, and certain Federal financial and nonfinancial assistance and benefits, pursuant to the provisions of 31 U.S.C. 6101, note, E.O. 12549, E.O. 12689, 48 CFR 9.404, and each agency's codification of the Common Rule for Non-procurement suspension and debarment. [See <https://www.epls.gov/> for additional information.]

30) If the bid is accepted, the required Contract must be executed within fifteen (15) days after receipt of written notice of formal award of Contract and Certificate of Insurance (COI) and Payment and Performance Bonds must be received.

31) Will you honor the submitted prices and terms for purchase by other departments within Georgetown County and/or by other government entities who participate in cooperative purchasing with Georgetown County, South Carolina?

Yes No

32) Acceptance of Invitation for Bid Content: The contents of the successful IFB/RFP are included as if fully reproduced herein. Therefore, the selected contractor must be prepared to be bound by his/her proposal as submitted.

33) 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 succeeding year.

34) 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

35) 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.

36) 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. 20-001 were received.

37) MINORITY PARTICIPATION [INFORMATION ONLY]

(a) Is the bidder a South Carolina Certified Minority Business?

Yes No

(b) Is the bidder a Minority Business certified by another governmental entity?

Yes No

If so, please list the certifying governmental entity: _____

(c) Will any of the work under this contract be performed by a SC certified Minority Business as a subcontractor?

Yes No

If so, what percentage of the total value of the contract will be performed by a SC certified Minority Business as a subcontractor? _____%

(d) Will any of the work under this contract be performed by a minority business certified by another governmental entity as a subcontractor?

Yes No

If so, what percentage of the total value of the contract will be performed by a minority business certified by another governmental entity as a subcontractor?
_____%

(e) If a certified Minority Business is participating in this contract, please indicate all categories for which the Business is certified:

- Traditional minority
- Traditional minority, but female
- Women (Caucasian females)
- Hispanic minorities
- DOT referral (Traditional minority)
- DOT referral (Caucasian female)
- Temporary certification
- SBA 8 (a) certification referral
- Other minorities (Native American, Asian, etc.)

(If more than one minority contractor will be utilized in the performance of this contract, please provide the information above for each minority business.)

38) ILLEGAL IMMIGRATION: Non-Construction (NOV. 2008): (An overview is available at 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]

39)

INFORMATION ONLY:

- Our company accepts VISA government procurement cards.
If yes, list any upcharge for P-Card Payment? _____
- Our company does not accept VISA government procurement cards.

40) Printed Name of person binding bid _____

41) Signature (X) _____

42) Date _____

NOTE: THE ENTIRE IFB PACKET NEED NOT BE RETURNED. Please be sure to provide all mandatory bid submittal forms as requested. Thank you.

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“EXHIBIT B”



BID #20-001
BRICK CHIMNEY ROAD IMPROVEMENT PROJECT

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 C”

**FORM OF NON-COLLUSION AFFIDAVIT OF PRIME PROPOSER / BIDDER
(Mandatory Bid Submittal Form)**

NON-COLLUSION OATH)

COUNTY OF: _____)

STATE OF: _____)

Before me, the Undersigned, a Notary Public, for and in the County and State aforesaid, personally appeared _____ and made oath that the Offeror Herein, his agents, servants, and/or employees, to the best of his knowledge and belief have not in any way colluded with anyone for and on behalf of the Offeror, or themselves, to obtain information that would give the Offeror an unfair advantage over others, not have they colluded with anyone for and on behalf of the Offeror, or themselves, to gain any favoritism in the award of the contract herein.

SWORN TO BEFORE ME THIS

_____ DAY OF _____, 2020

Authorized Signature of Offeror

NOTARY PUBLIC FOR THE

STATE OF: _____

My Commission Expires: _____

Print Name: _____

Address: _____

Phone Number: _____

(Note: Notary seal required for out-of-state offeror)

EXHIBIT D

Form **W-9**

(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer
Identification Number and Certification

Go to www.irs.gov/FormW9 for instructions and the latest information.

Give Form to the
requester. Do not
send to the IRS.

Print or type.
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
2 Business name/disregarded entity name, if different from above
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.
4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
5 Address (number, street, and apt. or suite no.) See instructions.
6 City, state, and ZIP code
7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see How to get a TIN, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see What Name and Number To Give the Requester for guidelines on whose number to enter.

Social security number
Employer identification number

Part II Certification

Under penalties of perjury, I certify that:

- 1. 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
2. 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
3. I am a U.S. citizen or other U.S. person (defined below); and
4. 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. See the instructions for Part II, later.

Sign Here
Signature of U.S. person
Date

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
Form 1099-S (proceeds from real estate transactions)
Form 1099-K (merchant card and third party network transactions)
Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
Form 1099-C (canceled debt)
Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

“EXHIBIT E”

**INDEMNIFICATION
(Mandatory Bid Submittal Form)**

The Bidder / Proposer 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 there from, and is caused by any negligent or willful act or omission of the Bidder / Proposer, 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 / Proposer, 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 / Proposer under the Worker’s Compensation Acts, Disability Benefit Acts, or other employee benefit acts.

The obligation of the Bidder / Proposer 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 / PROPOSER: _____

BY: _____

DATE: _____

TELEPHONE NO.: _____

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“EXHIBIT F”

**LIST OF PRIME AND SUBCONTRACTORS
(Mandatory Bid Submittal Form)**

The undersigned states that the following is a full and complete list of proposed prime contractor and subcontractors 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.

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

Date: _____ **Firm Name:** _____

Signed: _____ **Title:** _____

“EXHIBIT G”

**STATEMENT OF EXPERIENCE
(Mandatory Bid Submittal Form)**

The Bidder is requested to state below what work of similar scope and complexity he/she has successfully completed, and to provide references that will enable the Owner to judge his/her experience, skill and business standing and his/her ability to conduct the Work in conformance with the requirements of the Construction Contract Documents. The County requests a minimum of five (5) references from the Primary Contractor. The Bidder may print additional pages to provide additional references if they so choose.

Project and Location

Reference

1) _____ _____ _____	_____ _____ _____
2) _____ _____ _____	_____ _____ _____
3) _____ _____ _____	_____ _____ _____
4) _____ _____ _____	_____ _____ _____
5) _____ _____ _____	_____ _____ _____

Dated: _____

Firm Name: _____

Signed: _____

Title: _____

“EXHIBIT H”

**UNIT PRICE SCHEDULE
(Mandatory Bid Submittal Form)**

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 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.

Roadway Quantities					
ITEM NO.	PAY ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1031000	MOBILIZATION	LS	NEC		
1032010	BONDS AND INSURANCE	LS	1		
1052000	UTILITY RELOCATION	LS	NEC	\$30,000.00	\$30,000.00
1050800	CONSTRUCTION STAKES, LINES & GRADES	EA	1		
1071000	TRAFFIC CONTROL	LS	NEC		
1092000	AS-BUILT CONSTRUCTION PLANS	LS	1		
2011000	CLEARING & GRUBBING WITHIN RIGHT OF WAY	LS	NEC		
2031000	UNCLASSIFIED EXCAVATION	CY	47712		
2033000	BORROW EXCAVATION	CY	25282		
2034000	MUCK EXCAVATION	CY	26255		
2036000	GEOTEXTILE FOR SEPARATION OF SUBGRADE&SUBBASE/BASE CR	SY	26255		
2052000	NO. 57 STONE FOR BACKFILL	TON	914		
2081001	FINE GRADING	SY	54983		
3050110	GRADED AGGREGATE BASE COURSE (10" UNIFORM)	SY	47285		
3069900	MAINTENANCE STONE	TON	744		
3100310	HOT MIX ASPHALT BASE COURSE - TYPE A	TON	1622		
4010005	PRIME COAT	GAL	14186		
4011004	LIQUID ASPHALT BINDER PG64-22	TON	803		
4012080	FULL DEP.ASPH.PAV.PATCH-8"UNIF	SY	1000		
4013200	MILLING EXISTING ASPHALT PAVEMENT 2.0"	SY	7657		
4019000	MILLED-IN RUMBLE STRIP	MI	5.33		
4020320	HOT MIX ASPHALT INTERMEDIATE COURSE TYPE B	TON	7817		
4030340	HOT MIX ASPHALT SURFACE COURSE TYPE C	TON	484		
4030320	HOT MIX ASPHALT SURFACE COURSE TYPE B	TON	5790		
6021120	PERMANENT CONSTRUCTION SIGNS (GROUND MOUNTED)	SF	368		
609110E	PAVEMENT MARKINGS(TEMP-EPOXY) 6" WHITE BROKEN LINES	LF	190		
609115F	PAVEMENT MARKING(TEMP.-EPOXY)4" YELLOW SOLID LINES	LF	190		
6250025	24" WHITE SOLID LINES (STOP/DIAGONAL LINES)-FAST DRY PAINT	LF	168		
6250030	WHITE SINGLE ARROW (LEFT, STRAIGHT, RIGHT)-FAST DRY PAINT	EA	12		
6250035	WHITE WORD MESSAGE "ONLY"-FAST DRY PAINT	EA	20		

6250110	4"YELLOW SOLID LINE(PVT.EDGE&NO PASSING ZONE)-FAST DRY PAINT	LF	73390		
6250005	4" WHITE BROKEN LINES -(GAPS EXCLUDED)-FAST DRY PAINT	LF	1170		
6250012	6" WHITE SOLID LINES (PVT. EDGE LINES)-FAST DRY PAINT	LF	62286		
6262012	6" WHITE SOLID LINES (PVT. EDGE LINES) EPOXY PAINT	LF	190		
6262110	4"YELLOW SOLID LINES-PVT.EDGE&NO PASSING ZONE - EPOXY PAINT	LF	190		
6271005	4" WHITE BROKEN LINES(GAPS EXCL.)THERMOPLASTIC- 90 MIL.	LF	585		
6271012	6" WHITE SOLID LINES (PVT. EDGE LINES) THERMO.- 90 MIL.	LF	31143		
6271025	24" WHITE SOLID LINES (STOP/DIAG LINES)-THERMO.-125 MIL	LF	84		
6271030	WHITE SINGLE ARROWS (LT, STRGHT, RT) THERMO.-125 MIL.	EA	10		
6271035	WHITE WORD MESSAGE "ONLY" -THERMOPLASTIC - 125 MIL.	EA	10		
6271074	4" YELLOW SOLID LINES(PVT.EDGE LINES) THERMO-90 MIL.	LF	73390		
6300005	PERMANENT CLEAR PAVEMENT MARKERS- MONO-DIR.- 4"X4"	EA	20		
6301100	PERMANENT YELLOW PAVEMENT MARKERS BI-DIR.- 4"X4"	EA	349		
6510106	FLAT SHEET, TYPE III, SIZE DETERMINED BY MSG	SF	92		
6531210	U-SECTION POST FOR SIGN SUPPORTS - 3P	LF	196		
6531500	REFLECTIVE SIGN POST PANELS	LF	98		
6584690	BARRICADE - PERMANENT WITH TYPE III SHEETING	LF	30		
7141144	24"X 38" HORIZONTAL ELLIPTICAL(HE) RC PIPE CUL.-CLASS HE-III	LF	72		
7141148	34"X 53" HORIZONTAL ELLIPTICAL(HE) RC PIPE CUL.-CLASS HE-III	LF	432		
7142514	24" R. C. PIPE CUL. BEVELED END SECTN-CL 3	EA	6		
7142516	36" R. C. PIPE CUL. BEVELED END SECTN-CL 3	EA	8		
7143013	18" R. C. PIPE CUL. BEVELED END SECTN-CL 4 18"	EA	6		
7141112	15" RC PIPE CUL.-CLASS III	LF	922		
7141123	18" RC PIPE CUL.-CLASS IV	LF	524		
7141114	24" RC PIPE CUL.-CLASS III	LF	250		
7141116	36" RC PIPE CUL.-CLASS III	LF	388		
7192105	MANHOLE	EA	2		
7199100	BEVELING OF PIPE END	EA	16		
7199200	4' SLOPE FLUME (6" CURB STYLE WITH CUTOFFS)	LF	31		
7201010	CONCRETE CURB (6" AT BRIDGE)	LF	65		
7201100	CONCRETE CURB (TRANSITION)	LF	12		
7203210	CONCRETE CURB AND GUTTER(2'-0") VERTICAL FACE	LF	66		
7203220	CONCRETE CURB AND GUTTER(2'-0") SLOPING FACE	LF	2925		
7204000	CONCRETE WASHOUT	EA	2		
8020100	PLANTED MEDIAN SUBSURFACE DRAINAGE	SY	380		
8021204	4" PERFORATED PIPE UNDERDRAIN	LF	280		
8041020	RIP-RAP (CLASS B)	TON	1247		
8048215	GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP(CLASS 2)TYPE D	SY	1716		
8051151	MT3 LEADING END TREATMENT TL3	EA	1		
8051155	MT2 LEADING END TREATMENT TL2	EA	1		
8052150	MGS3CS GR COMPRESSED SHOULDER	LF	1000		
8052600	THRIE BEAM G.R.BRIDGE CONN.	EA	4		
8053257	FLUME INLET AT GUARDRAIL (HANDWORK)	EA	2		
8055250	NON-MOW STRIP UNDER GUARDRAIL	SY	50		
8055800	GUARDRAIL W-BEAM CURVED SYSTEM	LF	75		
8057500	GR TRAILING END TREATMENT W-BEAM TYPE B	EA	4		
8091010	RIGHT OF WAY MARKER(REBAR AND CAP)	EA	56		
8091050	RIGHT OF WAY PLAT	LS	1		
8100100	PERMANENT COVER	ACRE	25.4		
8100200	TEMPORARY COVER	ACRE	25.4		
8104005	FERTILIZER (NITROGEN)	LB	2537		

8104010	FERTILIZER (PHOSPHORIC ACID)	LB	2537		
8104015	FERTILIZER (POTASH)	LB	2537		
8105005	AGRICULTURAL GRANULAR LIME	LB	50727		
8109050	SELECTIVE WATERING	GAL	688607		
8109901	MOWING	ACRE	102		
8151110	TEMPORARY EROSION CONTROL BLANKET (ECB)	MSY	77.018		
8151201	HYDRAULIC EROSION CONTROL PRODUCT (HECP) - TYPE 1	ACRE	49.915		
8151203	HYDRAULIC EROSION CONTROL PRODUCT (HECP) - TYPE 3	ACRE	1.052		
8152007	SEDIMENT TUBES FOR DITCH CHECKS	LF	3935		
8153000	SILT FENCE	LF	10966		
8153090	REPLACE/REPAIR SILT FENCE	LF	1097		
8153801	DEWATERING BAGS	EA	4		
8154050	REMOVAL OF SILT RETAINED BY SILT FENCE	LF	2742		
8156490	STABILIZED CONSTRUCTION ENTRANCE	SY	1100		
S000001	19"X 30" HORIZONTAL ELLIPTICAL(HE) RC PIPE CUL.-CLASS HE-IV	LF	74		
S000002	PIPE AND BOLLARD DOUBLE GATE	EA	4		
S000003	CONCRETE MEDIAN	SY	1510		
S000004	CONCRETE STAMPING	SY	1510		
Roadway Quantities Subtotal					
<u>Bridge Quantities</u>					
ITEM NO.	PAY ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1031000	Mobilization	LS	NEC		
1050810	Staking for Bridge Construction	LS	NEC		
2028220	Removal & Disposal of Existing Bridge	LS	NEC		
6750278	2" PVC Conduit	LF	224		
7011400	Conc. for Structures - Class 4000	CY	237.7		
7023200	Grooved Surface Finish	SY	255		
7031200	Reinf. Steel for Structures (Bridge)	LBS.	54788		
7041010	AASHTO Type I Mod.	LF	324.8		
7054008	Concrete Bridge Railing Wall (2'8"HT)	LF	110		
7110001	Dynamic Pile Analyzer Test Steup	EA	4		
7110010	Pile Driving Set-Up	EA	17		
7113180	Steel Pipe Piling (18" Diameter)	LF	368		
7113182	Steel Pipe Index Piling (18" Diameter)	LF	58		
7243100	Elastomeric Bearing	EA	12		
8011210	Agg. Underdrain	Ton	133		
8142100	Waterproofing (Substructure)	SY	33.9		
Bridge Quantities Subtotal					
<u>Landscape Quantities</u>					
ITEM	PAY ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
S000005	Planter/ Soil Prep	LS	1.00		
S000006	Tree Gator Watering Bag	EA	6.00		
S000007	Sabal Palmetto	EA	6		
S000008	Sweet Grass	EA	122		
S000009	Pinestraw Mulch	SF	2,454		
Landscape Quantities Subtotal					
<u>GCWSD UTILITY RELOCATION QUANTITIES</u>					
ITEM	PAY ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
S000010	New 6"-8" Waterline Relocation along Brick Chimney Road/Johnson Road. Approximately 580 LF 6" and 220 LF 8" LF. Includes ALL required appurtenances.*	LS	1		

S000011	New 12" Waterline Relocation along Browns Ferry Road (SC-51). Approximately 1820 LF. Includes 120LF Bore and Jack. Includes ALL required appurtenances.*	LS	1		
S000012	New 8" Sewer Force Main Relocation along Browns Ferry Road (SC-51). Approximately 1480 LF. Includes 100LF Bore and Jack. Includes ALL required appurtenances.*	LS	1		
S000013	Abandonment (flowable fill) of existing 6" waterline along Brick Chimney Road/Johnson Road	LS	1		
S000014	Abandonment of existing 12" waterline along Browns Ferry Road (SC-51).**	LS	1		
S000015	Abandonment of existing 4" waterline along Browns Ferry Road (SC-51).**	LS	1		
S000016	Abandonment of existing 8" force main along Browns Ferry Road (SC-51).**	LS	1		
*Appurtenances include all fittings, sleeves, restraints, valves, valve markers, plugs, DIP for crossings, casings with spiders, etc. All fitting and joints shall be Mega-lug restrained. Locator tape required.					
** Abandon in-place using flowable fill.					
GCWSD Utility Relocation Quantities Subtotal					
					Grand Total

Bidder/Proposer: _____

Signature: _____

Title: _____

Dated: _____

“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 #2014-02 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

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 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.

I certify that [Company Name] _____ is a **Resident Bidder** of Georgetown County as defined in Ordinance #2014-02, (see §1. above) and our local place of business within Georgetown County is: _____

I certify that [Company Name] _____ is a **Non-Resident Bidder** of Georgetown County as defined in Ordinance #2014-02, and our principal place of business is _____ [City and State].

(X) _____
 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.

END OF SECTION 00300

SECTION 00400

BID BOND

Submit one (1) original, Power of Attorney, and Agent’s Current South Carolina license.

STATE OF _____)

COUNTY OF _____)

KNOW ALL MEN BY THESE PRESENT that we, _____

as Principal, and _____ as Surety, are

held and firmly bound unto Georgetown County, hereinafter called the Owner,

in the sum of _____ Dollars

(\$ _____) for the payment of which sum well and

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 _____, 2020 entered into a

certain Contract with the Owner, hereto attached, for Contract entitled **Bid #20-001, BRICK**

CHIMNEY ROAD IMPROVEMENT PROJECT

NOW THEREFORE, If the Principal shall not withdraw said Bid within NINETY (90) calendar days after date of opening of the same, and shall within five (5) calendar days after the prescribed forms are presented to him/her for signature, enter into a written Contract with the Owner in accordance with the Bid as accepted, and give a Performance Bond and a Payment Bond with good and

sufficient surety or sureties, as required by the Contract Documents, for the faithful performance and proper fulfillment of such Contract and for the proper payment of all persons furnishing labor or materials in connection therewith, or in the event or withdrawal of said Bid within the period specified, or in the event of failure to enter into such Contract and give such Bonds within the time specified, if the Principal shall pay the Owner the difference between the amount specified in said Bid and the amount of which the Owner may procure the required work and/or supplies, provided the latter amount be in excess of the former then the above obligations shall be void and of no effect; otherwise, to remain in full force and effect.

IN WITNESS WHEREOF, the Principal and Surety have hereunto caused this Bond to be duly executed

and acknowledged by their appropriate officials as set forth below this _____ day of _____, 2020.

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
SAMPLE CONTRACT**



STATE OF SOUTH CAROLINA)
)
 GEORGETOWN COUNTY)

CONSTRUCTION
 CONTRACT

THIS CONTRACT made and entered into this _____ day of _____ 20____, 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 29440; and _____ hereinafter referred to as the “Contractor”, a corporation formed and existing under the laws of the State of South Carolina and authorized to do business within the State of South Carolina, whose administrative address is: _____

IN WITNESS WHEREOF:

WHEREAS the Owner has a project entitled _____ hereinafter referred to as the “Project”, and;

WHEREAS, the Contractor has submitted a quotation 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:

SAMPLE

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 Plans, Technical Specifications and other Contract documents, on file at Georgetown County, which are duly approved by the Owner and which said Plans, 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, the Engineer, and each of their agents, representatives, directors, officers, 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, Trade Subcontractors, or their respective agents, directors, officers or employees in connection with this Agreement 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 Project has been designed by _____ whose office is located at _____, and who will act as ENGINEER in connection with completion of the Work in accordance with the Contract Documents.

4. The project will be considered substantially complete upon completion of all items listed in the Bid Form and appurtenances in accordance with the Contract Documents, including successful performance of all testing requirements.
5. 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.
6. The Contractor agrees to indemnify, defend and hold the Owner, and the Engineer, and each of their 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 Subcontractor, mechanic, laborer, or materialman 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 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 Subcontractors to comply with any of the terms or provisions of this Contract.
7. In any and all claims against the Owner, by any employee of the Contractor or Trade Subcontractor, anyone directly or indirectly employed by any of them, their agent or anyone for whose acts any of the Contractor or Trade Subcontractors 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 Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.
8. 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, pro tanto, made a part hereof for all purposes), subject to such additions and deductions as may be provided for in the 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 customarily provided by the County and consistent with applicable County 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.
9. 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 Code of Laws, made or received by the Contractor in conjunction with this Contract.
10. This Contract has been executed by the parties prior to the rendering of any goods or services by the Contractor.
11. The Contractor shall provide a payment and performance bond (the "Bond") to the Owner meeting the requirements of applicable South Carolina Code of Laws, The Georgetown County Procurement Ordinance, as amended, and associated bid documents referenced herein, which by virtue of executing

this contract the Contractor has accepted in the sum of \$ _____ and shall cause the Bond to be recorded with the Notice of Commencement in the Public Records of Georgetown County, South Carolina.

12. This Contract shall be subordinate to any rule, regulation, order or law of the United States of America, or the State of South Carolina, respectively.
13. Contractor and its employees shall promptly observe and comply with all applicable provisions of any Federal, State and local laws, ordinances, rules or regulations which govern or apply to the goods or services rendered by Contractor hereunder including the wages paid by Contractor to its employees. Contractors shall require all of its Subcontractors to comply with the provisions of this paragraph.
14. Contractor shall procure and keep in force during the term of this contract all necessary insurance (including but not limited to general liability, casualty, workers compensation, and automobile), 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 Subcontractors to comply with the provisions of this paragraph.
15. 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, investigative, legal support services and actual fees charged by expert witnesses for testimony and analysis, incurred by the prevailing party referable thereto.
16. Contractor represents and warrants unto Owner that no officer, employee or agent of Owner has any interest, either directly or indirectly, in the business or property for/on which the Contractor to conduct activities hereunder. Contractor further represents and warrants to Owner that it has not employed or retained any third party person, other than a bona fide employee working solely for Contractor, to bid, 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 Subcontractor agreements relating to the services to be performed hereunder.
17. 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.
18. This Contract, including all Contract documents such as, but not limited to, bid documents and procurement packages, constitutes the entire agreement between the parties and shall supersede and replace all prior agreements or understandings, written or oral, relating to the matters set forth herein.
19. 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 or State of South Carolina need not be approved by them.
20. 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.

21. 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 that may have been accumulated in performance of this Contract, whether completed, in transit, or in process, shall be delivered to the Owner. In such a case of termination, the contract price shall be made and remitted too include work already completed and materials already ordered however to amount shall be allowed for anticipated profit on unperformed services.
- b) 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.
- c) 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.
- d) 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.
- e) 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.

22. 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.

23. 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>.

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

IN WITNESS WHEREOF, the Owner and Contractor hereto have signed and sealed this Contract on the day and date first above written. To facilitate execution, this Agreement may be executed, including electronically, in as many counterparts as may be required. It shall not be necessary that the signature on behalf of both parties hereto appear on each counterpart hereof. All counterparts hereof shall collectively constitute a single agreement.

Georgetown County, South Carolina

Witness:

By: _____

John Thomas
Georgetown County Council Chair

[Company Name]

By: _____

SAMPLE

(Title)

Attest:

END OF SECTION 00500

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 _____, 2020 entered into a certain Contract with the Owner, included herein, for the Contract entitled **Bid #20-001, BRICK CHIMNEY ROAD IMPROVEMENT PROJECT.**

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 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 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 Contract Documents. If no specific periods of warranty are stated in the 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 _____, 2020.

PRINCIPAL

(Firm Name)

By: _____
(Title)

WITNESS

SURETY

(Firm Name)

By: _____
(Title)

WITNESS

END OF SECTION 00600

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 _____ Dolla

rs

(\$ _____) 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 _____, 2020 entered into a certain Contract with the Owner, included herein, for Contract entitled **Bid #20-001, BRICK CHIMNEY ROAD IMPROVEMENT PROJECT.**

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 _____, 2020.

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.

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 as specified in *The Project Manual, Vol. 1, Division 1, Section 01100, Summary of Work*, 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 this Project are as follows:

Milestone: **Substantial Completion**

Date: 600 Days from NTP

Milestone: **Final Completion**

Date: 660 Days from NTP

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 BRICK CHIMNEY ROAD IMPROVEMENT PROJECT Project 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

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.

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 two (2) Project signs, one on each end. The specifications, location and information to be included on the sign will be determined by the Owner and provided at the pre-construction meeting.

7.0 LANDSCAPING AND TREES

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

PART 2- PRODUCTS

Not Used

PART 3- EXECUTION

Not Used

END OF SECTION 00800

SECTION 00900

LIST OF DRAWINGS
BRICK CHIMNEY ROAD IMPROVEMENT PROJECT
GEORGETOWN, SOUTH CAROLINA

I – PLAN OF PROPOSED IMPROVEMENTS FOR PHASE I-BRICK CHIMNEY ROAD CORRIDOR
DRAWINGS

<u>SHEET TITLE</u>	<u>SHEET NO.</u>
TITLE SHEET	1
INDEX/LAYOUT SHEET	IL1
SUMMARY OF ESTIMATED QUANTITIES	2
TYPICAL SECTIONS AND MISC. DETAILS	3-3E
RIGHT-OF-WAY DATA SHEET	4
PROJECT NOTES/PROJECT INCLUSIONS	5
REFERENCE SHEETS	5A-5E
PLAN AND PROFILE SHEETS	6-17A
LANDSCAPING PLANS	L-101-L-200
PAVEMENT MARKING PLANS	PM1-PM6
EROSION CONTROL PLANS	EC01-EC02
CROSS SECTIONS	X1-X85

II – PLAN OF PROPOSED BRIDGE FOR PHASE I-BRICK CHIMNEY ROAD CORRIDOR
DRAWINGS

<u>SHEET TITLE</u>	<u>SHEET NO.</u>
TITLE SHEET	1
SUMMARY OF ESTIMATED QUANTITIES	2
GENERAL NOTES	3
GENERAL DETAILS	4
REINFORCING BENDING DETAILS	5
ROADWAY TYPICAL SECTION	6
ROADWAY PLAN AND PROFILE	7
BRIDGE PLAN AND PROFILE	8
BORING LOGS	9
FOUNDATION LAYOUT	10
END BENT 1 PLAN & ELEVATION	11
END BENT 1 DETAILS (SHEET 1 OF 2)	12
END BENT 1 DETAILS (SHEET 2 OF 2)	13
END BENT 2 PLAN & ELEVATION	14
END BENT 2 DETAILS (SHEET 1 OF 2)	15
END BENT 2 DETAILS (SHEET 2 OF 2)	16
PIPE PILE DETAILS	17
SUPERSTRUCTURE PLAN & ELEVATION	18
SUPERSTRUCTURE SECTION & DETAILS	19
STEEL INTERMEDIATE DIAPHRAGM DETAILS	20
FRAMING PLAN	21
PRESTR. CONC. BEAM DETAILS-AASHTO TYPE I	22
BEARING DETAILS	23
APPROACH SLAB PLAN	24
APPROACH SLAB DETAILS	25

[DAVIS & FLOYD DRAWINGS SHOULD BE PLOTTED TO 22 x 34 TO MAINTAIN SCALE]

III- GCWSD UTILITY RELOCATION DRAWINGS

<u>SHEET TITLE</u>	<u>SHEET NO.</u>
TITLE SHEET	1
EXISTING CONDITIONS DESIGN	2-5
DESIGN DRAWINGS	6-9
DETAILS	10

[GCWSD DRAWINGS SHOULD BE PLOTTED TO 24 x 36 TO MAINTAIN SCALE]

IV- ADDITIONAL ATTACHMENTS

F&ME CONSULTANTS GEOTECHNICAL ENGINEERING REPORT
PERMITS

END OF SECTION 00900

SECTION 01100

SUMMARY OF WORK

PART 1-GENERAL

The Summary of Work in this Section comprises the Brick Chimney Road Improvements Project, 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

BASE BID:

The Brick Chimney Road project will include realigning and paving approximately 2.5 miles of existing Brick Chimney Road from Johnson Road (S-318) to Browns Ferry Road (SC 51). This project will include a 55 LF proposed bridge with AASHTO Type 1 Mod Beams over International Paper's Canal (IP Canal). The roadway will include two paved 12-foot lanes, 10-foot shoulders with a minimum of 2 feet of the shoulder paved and roadside ditches. Intersection improvements of Brick Chimney Road at Johnson Road will include roadway widening and a raised median. The intersection of Brick Chimney Road will be widened and relocated along Browns Ferry Road and will include a raised median. Browns Ferry Road will be widened to add left and right turn lanes at Brick Chimney Road. Georgetown County Water & Sewer District has included plans for water line and force main relocations. All other utility relocations will need to be coordinated by the Contractor with the respective utility companies. The County has acquired all necessary Right-of-way. Permits have been obtained for the roadway construction from USACE, SCDHEC, SCDOT and Georgetown County Stormwater and are available for download under the bid information.

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 **\$1,400.00** 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. Refer to Division I, Section 01600, Product Requirements in the Project Manual.

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 25th day of the month, or the closest workday should the 25th 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 1st day of the succeeding month, or the closest work day should the 1st 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.

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).

D. Perform Work in compliance with the following industry references:

1. National Fire Protection Association (NFPA), National Electric Code (NEC).
2. NFPA 101, Life Safety Code.
3. SCE 7-88: Minimum Design Loads for Buildings and Other Structures.
4. American Society for Testing and Materials (ASTM).
5. Underwriters Laboratories (UL).
6. The National Board of Fire Underwriters.

1.03 FIRE RATINGS

A. Where material, component, or assembly is required to be fire rated, fire rating shall be determined or listed by the following testing agency:

1. Factory Mutual Laboratories (FM).

- B. Equivalent fire rating as determined or listed by another testing authority is acceptable if approved by applicable governing authorities having jurisdiction in and for Georgetown County, South Carolina.

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 adjacent 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

CONSTRUCTION PROGRESS AND DOCUMENTATION

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Schedule for Submittals
- B. Scheduling Personnel (NIC)
- C. Contract Milestones
- D. Submittal Schedule
- E. Material Procurement Schedule
- F. Construction Activities Schedule
- G. Construction Activities Schedule Revisions and Updates
- H. Short Interval Schedule
- I. Adjustments of Time for Completion

1.02 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents in the Project Manual, more specifically Section 00750, Summary Schedule and Key Milestones apply to this Section.
- B. Division 1, General Requirements in the Project Manual, more specifically Section 01100, Summary of Work, Section 01330, Submittal Procedures and Section 01770, Close Out Procedures apply to this Section.

1.03 SCHEDULE FOR SUBMITTALS

- A. Allow ten (10) calendar days for review and turnaround of any submittals as may be required in the Drawings and / or Technical Specifications. All required Submittals shall be forwarded directly to the Architect / Engineer of record with sufficient time to allow for review, approval, fabrication and delivery to support the Schedule as outlined. Copy of the transmittal only must be sent to the Owner.
- B. The Contractor shall submit the following as may be appropriate and acceptable to the Owner:
 - 1. Schedule of Submittals and Product Data: To be submitted within ten (10) calendar days from Notice to Proceed (NTP). Schedule shall show submittals commencing within ten (10) calendar days from NTP and completing within sixty (60) calendar days from NTP.
 - 2. Material Procurement Schedule: To be submitted within ten (10) calendar days from NTP.
 - 3. Construction Activities Schedule: To be submitted within ten (10) calendar days from NTP.
 - 4. Short Interval Schedule: To be submitted within seven (7) calendar days from NTP.
 - 5. Inspection and Material Testing Schedule: To be submitted within twenty-one (21) calendar days from NTP.

1.04 SCHEDULING PERSONNEL

- A. Not Included (NIC)

1.05 CONTRACT MILESTONES

- A. Key Milestones developed by the Owner and provided for in Division 0, Section 00750, Summary Schedule and Key Milestones in the Project Manual, are to be incorporated into the Contractor's Construction Schedule.
- B. Key Milestones: Key Contract Milestones (the "Milestones") are significant interim dates on the Critical Path of the Work and within the Contract Time at which certain portions of the Work must be either partially or totally complete in order for the Work to be in compliance with the Contract Documents
- C. Identify all Milestones in the Schedule Submittals, whether or not the Owner has identified those dates in the Bidding and Contract Documents.
- D. Milestones will be clearly identified in all Contractor submitted schedules and will serve as an essential instrument of measurement, by the Owner, of the Contractor's compliance with the Contract Documents.
- E. Failure by the Contractor to achieve Milestones by the Contract Dates may result in Owner implementing contractual remedies, as required, in order to regain the Contract Schedule.

1.06 SUBMITTAL SCHEDULE

- A. Within ten (10) calendar days after NTP, develop and submit a Schedule of Submittals on a form acceptable to the Owner. At a minimum, the Submittal Schedule shall be in the form of: (i) a hard copy; and, (ii) an electronic version (PDF) to be approved by the Owner.
- B. Incorporate all submittals required by the Contract Documents for the duration of the Contract Time.
- C. Integrate the Submittal Schedule into the Contract Schedule and link material and equipment deliveries as appropriate to construction work activities.
- D. Submit status of the Submittal Schedule with the monthly Contract Schedule Status Submission.
- E. Indicate changes from the previous report with an asterisk.
- F. The Owner's review of the Submittal Schedule does not constitute it to be a complete listing of all submittals required by the Contract.

1.07 MATERIAL PROCUREMENT SCHEDULE

- A. Within ten (10) calendar days after the NTP, develop and submit a Material Procurement Schedule on a form acceptable to the Owner. At a minimum, the Submittal Schedule shall be in the form of (i) a hard copy and (ii) an electronic version (PDF) to be approved by the Owner.
- B. Incorporate all material required by the Contract Documents for the duration of the Contract Time.
- C. Integrate the Material Procurement Schedule with the Schedule of Submittals and the Contract Schedule.
- D. Review the Material Procurement Schedule at the weekly scheduled Construction Progress Meeting.
- E. Submit status of the Material Procurement Schedule with the monthly Contract Schedule Status Submission.
- F. Indicate changes from the previous report with an asterisk.

1.08 CONSTRUCTION ACTIVITIES SCHEDULE

- A. Within ten (10) calendar days following NTP and prior to submission of the first Application for Payment, submit the Construction Activities Schedule (Project Schedule) both in (i) a hard copy and (ii) electronic version (PDF). The Project Schedule shall employ the Critical Path Method (CPM) and may utilize Microsoft Project or equal.
- B. Incorporate all Key Milestones as designated by the Owner in the Contract Documents, Division 0, Section 00750, as well as other Milestones the Contractor identifies as significant points in time.
- C. At a minimum, the Construction Activities Schedule (Project Schedule) shall include the following:
1. A computer-generated bar chart, based upon the CPM logic, organized by discipline and resource and sorted by early start, early finish.
 2. No work activity shall exceed fifteen (15) working days in duration, unless agreed upon by the Owner.
 3. Each activity shall be cost loaded to reflect the estimated value of performing the work. Activity cost shall consist of the sum of labor, materials, equipment, supervision and allocated overhead. The sum of all activity cost shall equal the Contract Sum.
 4. All Milestones, submittal dates and completion dates for all shop drawing activities, material procurement, fabrication and delivery dates shall be in support of the Construction Activities Schedule. Anticipated types and durations of usage for major equipment, and any other scheduling data relevant to the Work shall be included.
 5. Activities required for Project Closeout shall include appropriate activities for obtaining Substantial Completion, Punch List, Punch Work, Final Inspections (including pre-inspections and system checkouts), Closeout Submittals (Certificates, Warranties, Manuals, Release of Liens, As-Constructed drawings etc.). Show Milestones for Substantial Completion, Temporary Certificate of Occupancy (where appropriate), Certificate of Occupancy, and Final Completion.
 6. Weather conditions, such as high or low ambient temperatures, wind, and/or precipitation, can influence progress of the work shall be considered and allowed for in the planning and scheduling of work. This is to ensure completion of the work within the Contract time. Weather conditions shall be determined by an assessment of average historical climatic conditions based upon the preceding ten (10) year records published for the locality by the U.S. Weather Bureau Service. Weather must be unusually severe and beyond the 10 year average to even be considered as having impacted the Project Schedule.
 7. The Project Schedule shall indicate holidays and any non-work days applicable to the schedule.
- D. Joint Review, Revision, and Acceptance of the Construction Activities Schedule:
1. Within five (5) calendar days of receipt of Contractor's proposed Construction Activities Schedule (Project Schedule), the Owner and the Contractor shall meet for joint review of the Project Schedule to address corrections or adjustments needed. Any areas that conflict with timely completion of the Work of the Project shall be subject to revision by the Contractor at no cost to the Owner.
 2. Within five (5) calendar days after joint review, the Contractor shall revise and resubmit the Project Schedule in accordance with agreements reached during review. Within five (5) calendar days of resubmission of the revised proposed Project Schedule, the Owner and Contractor shall again meet for joint review.

3. Any areas of the schedule still not in compliance shall be corrected and the Project Schedule resubmitted for acceptance within three (3) calendar days of the joint review.
 4. If the Contractor fails to define any element of work, activity or logic, and the Owner's review does not detect this error or omission, such error or omission when discovered shall be corrected at the next monthly update without change to Contract Time, and at no cost to the Owner.
 5. If the Owner questions Contractor's proposed logic, activity duration or cost, Contractor shall provide satisfactory revisions or adequate justification, within five (5) calendar days of receipt of written request. Any changes to the Project Schedule shall be at the Contractor's sole cost and expense.
- E. The Project Schedule shall become the basis for tracking and measuring progress once the Owner has provided written acceptance of the Contractor's submittal. Acceptance of the Project Schedule by the Owner does not relieve Contractor of any responsibilities for the accuracy or feasibility of the schedule, or the Contractor's ability to meet Substantial Completion, Contract Completion and/or Key Milestones – Intermediate dates. Also, acceptance does not warrant, acknowledge or admit the reasonableness of logic, activity duration or cost loading of the Project Schedule.

1.09 CONSTRUCTION ACTIVITIES SCHEDULE REVISIONS AND UPDATES

- A. The Construction Activities Schedule (Project Schedule) shall be updated monthly to show progress and submitted for the Owner's review. The Contractor shall provide the updated Project Schedule with each payment application. This shall include two (2) schedule hard copies and reports along with one electronic version using Microsoft Project or equal software. Non-submittal of the update will be grounds to withhold the Application for Payment.
- B. Updating of the Project Schedule to reflect actual progress shall not be considered revisions to the Schedule. The accepted Project Schedule cannot be changed (revised) without review and acceptance, by the Owner of the Contractor's proposed change.
- C. After the monthly Schedule Update, if the Project Schedule no longer represents actual progress of the Work, Contractor shall revise the Project Schedule to properly reflect progress and resubmit to the Owner. Any costs determined as a product of the Schedule Update shall be borne solely by the Contractor
- D. If Contractor desires to make changes in the Project Schedule to reflect revisions in method(s) of operating and scheduling of Work, Contractor shall notify the Owner in writing, stating the reason for the proposed revision. After the Owner accepts the proposed revision, the Contractor shall implement the revision within three (3) calendar days and submit the Project Schedule to the Owner for review and final approval. Any costs determined as a product of the Project Schedule changes shall be borne solely by the Contractor
- E. In addition, revisions to the Project Schedule that are requested by the Owner shall be made by the Contractor within three (3) calendar days of the requested revision.
- F. All revisions to the Project Schedule shall be identified by an appropriate activity code. The Contractor shall submit the proposed code structure to the Owner for approval. Approval of the codes and requested revision(s) are required prior to revising the accepted Project Schedule.
- G. If the Contractor defaults by failing to submit a Project Schedule, or provide the required updates or revisions, the Owner reserves the right to prepare the Project Schedule, update, or revision back charging the Contractor for the cost of this work. In such an event:

1. The Owner will request the Contractor's participation in the development of the Project Schedule, update or revision to assure the Project Schedule produced accurately reflects Contract requirements and progress of the Work. The Contractor shall respond and participate in this effort within three (3) calendar days of the Owners request.
2. If the Contractor refuses to participate or cooperate with the Owner, then the Owner will develop the status of the Project Schedule to the best of its ability with the information available.
3. Whether the Contractor participates or not, the Project Schedule shall be issued for the use of a unilateral Change Order to the Contract as may be appropriate and determined by the Owner.

1.10 SHORT INTERVAL SCHEDULE

- A. Within seven (7) calendar days from receipt of Notice to Proceed (NTP) the Contractor shall submit to the Owner a Short Interval Schedule.
- B. The Short Interval Schedule shall be a time-scaled, hand-drawn or computer generated schedule and be consistent with the timing and sequencing of the Construction Activities Schedule (Project Schedule). It is not required to be in a CPM format.
- C. The Short Interval Schedule shall depict all activities planned to occur within the next four (4) weeks from the data date and show status for activities, which have occurred within the prior one (1) week from the data date.
 1. Generally, no activity presented in the Short Interval Schedule shall have a duration greater than five (5) working days.
 2. The Owner, from time to time, may require the Contractor to further define activities on the Short Interval Schedule that have a duration greater than one (1) day.
- D. The Contractor shall update the Short Interval Schedule at a minimum of once a week for the duration of the project. It shall be submitted to the Owner at regularly scheduled Progress and Coordination meetings. The data date shall be within one (1) workday of the aforesaid meeting.
- E. The Short Interval Schedule shall be utilized with Contractor's prime and sub-contractors and other project parties for the near term coordination of the Work.
- F. All Milestones identified in the Contract and scheduled to take place within the calendar time frame of the Short Interval Schedule shall be included in the Schedule.

1.11 ADJUSTMENT OF TIME FOR COMPLETION

- A. Time for Completion will be adjusted only in accordance with this Clause and the Contract Documents.
- B. Any request for adjustment of time for completion because of changes or alleged delays shall be accompanied by a complete and comprehensive **Time Impact Analysis Proposal**, which shall be submitted for approval within five (5) calendar days of the event causing delay. Failure to provide the proper notice within this time frame shall be construed as the Contractor's acceptance that the event causing delay can be absorbed into the Construction Activities Schedule (Project Schedule) without causing a delay to the project completion or any Key Contract milestone date.
- C. Each **Time Impact Analysis Proposal** shall provide information justifying the request and stating the extent of the adjustment requested. Each Analysis shall be in a form and content acceptable to the Owner and shall include, but not be limited to, the general information set forth in this section appropriate to the type of request (change or alleged delay) including the following:

1. A fragnet (a detailed sub-level schedule) CPM Schedule illustrating how Contractor proposes to have the change or alleged delay incorporated into the current Updated Project Schedule.
2. Identification of activities in current updated Project Schedule, which are proposed to be amended due to the change or alleged delay, together with engineering estimates and other appropriate data justifying the proposal.
3. **Time Impact Analysis Proposals** shall be based upon the dates when the change or changes were issued, or dates when alleged delay or delays began, status of work at that time, and shall include time computations for affected activities.
4. Activity delays shall not automatically mean that an extension of the Contract Time is warranted or due to the Contractor. *It is the Owner's intention to own and control all float time indicated in the Project CPM Schedule.*
5. Contract Time Extensions or Key Contract Milestone Adjustments will only be considered when a Critical Path activity or activities are affected and a resulting delay extends the Contract Completion Date or Key Contract Milestone date(s).
6. Adjustment of a Key Contract Milestone date(s) may not necessarily result in an adjustment to the Contract Completion Date.
7. As an alternative to extending the Contract Completion Date or adjusting Key Contract Milestones, the Owner may require the Contractor to adjust the Project Schedule. This shall be accomplished by revising logic, adding resources, working crews on overtime, working additional shifts, and any other mitigating measures that the Owner determines is in the best interest of the project and the Public. Contractor agrees to fully cooperate with the Owner in finding the most effective (least cost) means to accomplish this task when requested.
8. Should the Owner find, after review of the **Time Impact Analysis**, that the Contractor is entitled to an extension of time for completion, the time extension for completion will be considered for approval by the Owner.
9. **Time Impact Analysis** related to Change Order Work and/or Contract Time Extensions shall be incorporated into and attached to the applicable Change Order to be prepared by the Owner.

1.12 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 01320

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SECTION 01322

PHOTOGRAPHIC DOCUMENTATION

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 progress record photographs shall be taken by the Contractor periodically during the course of the Work as requested by the Owner.
- C. Furnish construction photographs taken at commencement of Work and at monthly intervals until completion of the Work.
- D. Views and quantities required:
 - 1. At each specified time, take photographs from numerous different views to show the progress of the Work. Indicate date photo was taken on all photographs.
 - 2. Furnish one (1) digital copy in a mutually acceptable format to the Owner.
 - 3. The Owner shall have the right to request fewer photographs be taken at certain intervals so more photographs may be taken at other times, providing the total number of photographs remains unchanged.
- E. Do not display photographs in publications, contests or other public or private forums without the express written consent of Owner.
- F. Assemble construction photographs at project closeout in accordance with requirements stipulated in Section 01781, Project Record Documents.

1.02 RELATED REQUIREMENTS

- A. Division 1, General Requirements of the Project Manual.
- B. Section 01781, Project Record Documents.

1.03 COST OF PHOTOGRAPHY

- A. Contractor shall pay all costs for specified photography and prints.

PART 2 –EXECUTION

2.01 VIEWS REQUIRED

- A. Consult with the Owner for instructions concerning views required at each specified visit to Site.
- B. Photographs from locations to adequately illustrate conditions of construction and progress status.

2.02 DELIVERY

- A. Deliver digital photos to the Owner as soon as available.

END OF SECTION 01322

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Submit shop drawings, product data, samples, coordination drawings and certifications concurrently as required in the applicable Drawings and / or Technical Specifications.
- B. Prepare and submit to the Owner no later than ten (10) calendar days after receipt of Notice to Proceed (NTP), a list of submittals required by each applicable Section of the Technical Specifications. Submit in accordance with this Section and the requirements of Section 01310, Project Management and Coordination.
- C. Designate in schedule data dates for submission and review of shop drawings, product data and samples and the date of return.

1.02 RELATED REQUIREMENTS

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

1.03 SHOP DRAWINGS

- A. Present drawings in a clear and thorough manner. Prepare original, project specific documents-do not reproduce Construction Documents.
- B. Identify details by reference to sheet and detail, schedule or room numbers shown on Contract Drawings or as may be referred to in the Technical Specifications.
- C. Consecutively number shop drawings for each section of Work. Retain numbering system throughout all revisions.
- D. Show detail, material, dimensions, thickness, methods of assembly, attachments and relationship to adjoining Work and other pertinent data and details.
- E. Verify dimensions and field conditions. Clearly indicate field dimensions and field conditions.
- F. Check and coordinate shop drawings of any Section or trade with requirements of other Sections or trades as related and as required for proper and complete installation of Work.
- G. Prepare composite shop drawings and installation layouts when necessary or requested to depict proposed solutions for tight field conditions. Coordinate in field with affected trades for proper relationship to work of other trades based on field conditions.

1.04 PRODUCT DATA

- A. Preparation
 - 1. Annotate each sheet to clearly identify specific product or part installed, and specific data applicable to installation.

2. Show performance characteristics and capacities.
3. Show dimensions and clearances required.
4. Show wiring or piping diagrams and controls.
5. Indicate specified finish.
6. Indicate only those sheets, which are pertinent to specific product(s) with product clearly identified.

B. Manufacturer's standard schematic drawings and documents.

1. Modify drawings and diagrams to delete information which is not applicable to the Work.
2. Supplement standard information to provide information which is applicable to the Work.

1.05 SAMPLES

- A. Provide a minimum of two (2) samples, or as otherwise indicated in the Technical Specifications, of sufficient size to clearly illustrate:
1. Functional characteristics of the product, with integrally related parts and attachment devices.
 2. Full range of color, texture, and pattern.
 3. Samples shall be referenced to the applicable section of the Technical Specifications.

1.06 MANUFACTURER'S CERTIFICATION OF MATERIALS AND EQUIPMENT

- A. Before shop drawings or manufacturer's data for equipment are submitted for approval, a duly authorized manufacturer's representative of the proposed equipment shall review the design of the system relative to the proper operation of his/her equipment and material.
1. Shop drawings and/or manufacturer's data submitted shall include letter from manufacturer's representative certifying that his/her equipment and materials will operate and function satisfactorily under the proposed design conditions. If required by the jurisdiction having authority, data shall be signed and sealed by a South Carolina Registered Engineer in the respective discipline.
- B. Before the work is accepted, a duly authorized manufacturer's representative of the installed equipment shall inspect the installation and operation of his/her equipment and materials to determine that they are properly installed and properly operating in accordance with the manufacturer's recommendations.
- C. Systems requiring certification will be specified in each of the applicable Sections of the Technical Specifications.

1.07 CONTRACTOR REVIEW

- A. Contractor shall review all submittals prior to transmittal to the Architect / Engineer of record and the Owner.
1. The Contractor shall consecutively number all shop drawings and product data transmittals. Re-submittals would have the same number of the previous submittal followed by the suffix "A, B, C etc."
 2. The transmittal is to contain the Owner's RFP / Bid number and the applicable specification section for each product represented on the transmittal.

- B Apply Contractor's stamp to submittals, initialed or signed by authorized person and dated, certifying: review of submittal, verification of products, field measurements, and field construction criteria, and coordination of information within submittal with requirements of Work and the Construction Contract Documents.
- C Submittals without Contractor's stamp or submittals which, in the Owner's and the Architect / Engineer of record opinion are incomplete, contain numerous errors, or have not been checked or have only been checked superficially, will be returned without comments. Delays resulting therefrom shall be solely the Contractor's responsibility.
- D Clearly note proposed deviations from the Contract Documents on submittals. Submit listing identifying deviations in a format acceptable to the Architect / Engineer of record and the Owner.
- E Contractor shall be responsible to ensure quantities and dimensions shown on submittals comply with the requirements of the applicable Drawing and Technical Specifications.

1.08 SUBMISSION REQUIREMENTS

- A. Make submittals promptly to the Architect / Engineer of record and the Owner in accordance with approved Submittal and Project Progress Schedule and in such sequence as to cause no delay in the Work.
- B. Number of submittals required:
 - 1. Shop Drawings: Submit two (2) full size, hard copies and one (1) electronic version (PDF) in addition to what the Contractor will require back; submit one (1) additional electronic version (PDF) each for civil, structural, mechanical, electrical, or landscaping work.
 - 2. Product Data: Submit two (2) originals that will be retained by the Architect / Engineer of record and the Owner.
 - 3. Samples: Submit the number stated in each of the respective Technical Specifications, with a minimum of two (2) samples, or as otherwise noted in the applicable Technical Specifications, for each item.
- C. Submittals shall contain:
 - 1. Date of submission and dates of any previous submissions.
 - 2. Owner Bid number.
 - 3. The names of:
 - a. Contractor.
 - b. Subcontractor.
 - c. Supplier.
 - d. Manufacturer.
 - 4. Identification of the product, with the applicable Specification Section number.
 - 5. Field dimensions, clearly identified as such.
 - 6. Relation to adjacent or critical features of the Work or Materials.
 - 7. Applicable standards, such as ASTM or Federal Specification numbers.
 - 8. Identification of deviations from Contract Documents and justification.
 - 9. Identifications of revisions on re-submittals.
 - 10. Additional information as required by Contract Documents.
 - 11. An 8 in. x 3 in. blank space for Contractor and Architect/Engineer stamps.
- D. Contractor's responsibility for deviations in submittals from requirements of Contract Documents is not relieved by the Architect / Engineer of record or Owner

review of submittals

- E. Numbering system established by the Contractor shall be agreeable to the Owner

1.09 RESUBMISSION REQUIREMENTS

- A. Contractor will make any corrections or changes in the submittals required by the Architect / Engineer of record or the Owner, mark number of submission, and resubmit as required until approved; none of this shall be of any cost to the Owner.
- B. Shop Drawings and Product Data:
 - 1. Contractor will revise initial drawings and data, and resubmit as specified for the initial submittal.
 - 2. Contractor will indicate any changes which have been made other than those requested by the Architect / Engineer of record or the Owner.
 - 3. Mark number of submission and resubmit until accepted.
- C. Samples: Contractor will submit new samples as required for initial submittal. Remove samples, which are “rejected” or designated “resubmit.”

1.10 REVIEW RESPONSIBILITIES – ARCHITECT / ENGINEER OF RECORD (A/E)

- A. The A/E shall review submittals, when applicable, with responsible promptness in accordance with the requirements of the Project Manual.
- B. The A/E will affix stamp and initials or signature, and indicate requirements for revisions and re-submittal, if any.
- C. The A/E will return submittals to Contractor, with copy of transmittal to Owner, for distribution, or for resubmission within five (5) days of original receipt.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used.

END OF SECTION 01330

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 01400

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor's Quality Control (QC), in addition to customary testing and control requirements and those included in the Construction Contract Documents.
- B. Manufacturer's field services, coordinated by the Contractor.

1.02 RELATED REQUIREMENTS

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

1.03 GENERAL QUALITY CONTROL

- A. Maintain Quality Control over construction activities, suppliers, manufacturers, products, services, site conditions, and workmanship of all personnel to assure Work is of specified quality.
- B. Quality inspections:
 - 1. Contractor shall be the first line of quality control and shall review all items for compliance with the Drawings and Technical Specifications reviewed and approved by the Owner. Prior to Owner's Testing Laboratory inspectors performing Quality Assurance (QA) review and inspections such as rebar placement, asphalt and concrete, piling inspection, soil compaction, etc., the Contractor shall have verified conformance to the requirements of the Construction Contract Documents, plans and technical specification prepared by the Architect / Engineer of record and reviewed and approved by the Owner.
 - 2. Maintain a written Quality Assurance / Control Program establishing the methods of assuring compliance to the contract documents. The Program shall be submitted to, reviewed and approved by the Owner. Quality Control personnel shall be identified at the initiation of the Project and shall be adequate to monitor the Work effectively and to enforce the Quality Assurance / Control procedures.
 - 3. Inspect each phase of Work for compliance with Contract Documents, plans and specification prepared by the Architect / Engineer of record and reviewed and approved by the Owner.
 - 4. Contractor shall have defective conditions corrected before calling for inspections and starting subsequent operations which would cover or are dependant upon the Work in question.
 - 5. Where visual inspection is not sufficient, such as in verifying slope of pavement or depth of retention / detention ponds for proper drainage, use instruments with qualified operators to inspect work.
 - 6. Secure the services of a testing laboratory when necessary to assist in evaluating quality.

1.04 WORKMANSHIP

- A. Comply with industry standards, except when more restrictive tolerances or specified requirements are called for in Construction Contract Documents, plans and specifications prepared by the Architect / Engineer of record and reviewed and approved by the Owner.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stress, vibration and other forces such as, but not limited to hurricane force winds.

1.05 MANUFACTURER'S INSTRUCTIONS

- A. When required by the Technical Specifications, submit manufacturer's current printed instructions, in the quantity required for product data, for delivery, storage, assembly, installation, startup, adjusting and finishing, as necessary.
- B. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Construction Contract Documents, plans and technical specifications prepared by the Architect / Engineer of record and reviewed and approved by the Owner, Contractor shall re-submit and provide written clarification and explanation to the Architect / Engineer of record and the Owner.

1.06 MANUFACTURER'S CERTIFICATES

- A. When required by the Technical Specifications, supplier/manufacturer shall provide qualified personnel to observe field conditions, conditions of the surfaces and installation, quality of workmanship, start-up of equipment, testing, adjusting and balancing of equipment as applicable, and to make appropriate recommendations.

1.07 MANUFACTURER'S FIELD SERVICES

- A. When specified in the respective Technical Specification Sections, the supplier/manufacturer will provide qualified personnel to observe field conditions, conditions of the surfaces and installation, quality of workmanship, start-up of equipment, testing, adjusting and balancing of equipment as applicable, and to make appropriate recommendations.
- B. Manufacturer's Representative shall submit written report to Architect / Engineer of record and the Owner listing observations and recommendations.

1.08 CONTRACTOR'S CERTIFICATION

- A. Contractor shall supply written certification that the Work, as installed, has been reviewed by him/her for compliance with the Contract Documents, applicable Drawings and Technical Specifications.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION 01400

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Unless otherwise 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. This is intended to provide Quality Assurance (QA) of the work performed and material provided by the Contractor.
 - 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.
 - 3. Contractor shall obtain testing prior to Owner's testing as may be necessary.
 - 4. Owner's testing shall not be a substitute for Contractor's own Quality Control (QC) measures.
- 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: Contractor shall conduct, or have performed all inspections and testing required by laws, ordinances, rules, regulations, orders, or approvals of public authorities and as may be specified in the Construction Contract Documents..
- B. Each specification section listed: Contractor shall perform each inspection and laboratory test required, and standards for testing as specified in the Construction Contract Documents.
- 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 the Construction Contract Documents.
- G. Failure on part of Owner to perform 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, Architect / Engineer of record and Contractor; provide qualified personnel after due notice from the Owner or 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, Architect / Engineer of record 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 , Architect / Engineer of record and Contractor. Each report shall include:
 - 1. Date issued.
 - 2. Project title and location
 - 3. Owner RFP or Bid Number
 - 4. Testing laboratory name, address and telephone number.
 - 5. Name and signature of laboratory inspector.
 - 6. Date and time of sampling or inspection.
 - 7. Record of temperature and weather conditions.
 - 8. Date of test.
 - 9. Identification of product.
 - 10. Location of sample or test in the Project.
 - 11. Type of inspection or test.
 - 12. Results of tests and compliance with Contract Documents.
 - 13. Interpretation of test results, when requested by Owner
- E. Perform additional tests as may 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 Construction 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; 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.
- 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 Architect / Engineer of record and 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 or inability to perform the prescribed 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 Construction 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 Architect / Engineer of record and Owner 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 Substantial 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 and as may be required in the applicable Technical Specifications.

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 Drawings, Technical Specifications of the Construction Contract Documents or appropriate regulatory and approval agency.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION 01410

SECTION 01500

TEMPORARY FACILITIES AND UTILITIES (If Required by Contractor)

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.
- B. Furnish, install and maintain temporary utilities required for construction, to be removed at completion of Work.
- C. Provide and maintain methods, equipment, and temporary construction required to control environmental conditions at construction site and other areas under Contractor's control. Remove evidence of temporary facilities at completion of Work.
- D. Furnish and pay for installation of all temporary utilities, permanent utilities except as provided by Owner, or fuel required for testing of installed equipment and systems.

1.02 RELATED REQUIREMENTS

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

1.03 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with National Electric Code (NEC), federal, state, and local codes and regulations and with utility company requirements.
- B. Comply with State of South Carolina regulatory agencies having judicial authority.
- C. All affected Utility Organizations should be contacted by the Contractor to arrange temporary utilities. The appropriate Utility Organization, as well as other Contacts are listed on the cover sheet of the construction contract drawings.

PART 2 – PRODUCTS

2.01 MATERIALS, GENERAL

- A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

2.02 TEMPORARY ELECTRICITY AND LIGHTING

- A. Arrange with Santee Electric Cooperative – Electric utility for temporary service.
- B. Contractor will pay all electrical consumption charges.

2.03 TEMPORARY HEAT AND VENTILATION

Not Used

2.04 TEMPORARY TELEPHONE SERVICE

Not Used

2.05 TEMPORARY WATER

- A. Arrange with Georgetown County Water & Sewer District for temporary service.
- B. Furnish and install temporary water line and distribution from a point designated by the Owner, if determined to be necessary.
- C. Contractor will pay all water consumption charges.

2.05 DRINKING WATER

- A. The Contractor shall furnish potable water for drinking of all personnel connected with the Work of this contract.
- B. Pipe or transport water to keep clean and fresh.
- C. Provide drinking water in suitable containers or dispensers and paper cups located in close proximity to where work is in progress.

2.06 TEMPORARY SANITARY FACILITIES

- A. Provide portable chemical-type sanitary facilities in compliance with applicable health laws, and state, county and local regulations and ordinances.
- B. Service, clean and maintain facilities and enclosures.
- C. Facilities shall be fitted with approved sanitary holding capacity and shall be emptied periodically to prevent overflow. Legal disposal of sanitary waste must be off-site and is Design/Builder's responsibility.
- D. Construction workers and project staff shall not use permanent plumbing facilities
- E. Sanitary facilities failing to meet required standards or maintenance methods shall be corrected immediately.
- F. Contractor will pay all costs for installation, maintenance and removal.

2.07 TEMPORARY FIRE PROTECTION

- A. During construction, provide temporary fire protection and life safety provisions in accordance with local jurisdiction requirements, the International Code and / or NFPA Standards.
- B. A "Hot Work" permit may be required when welding or cutting operations are to take place. Take necessary precautions in welding or cutting operations to keep work area free of combustible materials. Do not use welding equipment around flammable liquids or vapors.

- C. Keep welding and cutting equipment outdoors wherever possible. Remove welding and cutting equipment from any structure daily, wherever practical.
- D. At completion of welding or cutting operations, inspect work and adjacent area for hazards. When operations are near any building opening, inspect areas above, below or adjacent to work area hazards.
- E. Do not open, turn off, interfere with, attach any pipe or hose to, or connect anything to any fire hydrant, stop valves, or stop cock, or tap any water main without prior written permission of proper authority or the Owner.

PART 3 – EXECUTION

3.01 GENERAL

- A. Comply with local jurisdiction and all other applicable requirements as stated in this Section.
- B. Contractor shall obtain and pay for all required permits for the Work.

3.02 REMOVAL

- A. Completely remove from the project site temporary materials and equipment when their use is no longer required.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities immediately after removal.
- C. Restore existing facilities used for temporary services to specified, or to original, condition.
- D. Restore permanent facilities used for temporary services to specified condition.

END OF SECTION 01500

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

SECTION 01530

BARRIERS

PART 1 – GENERAL

1.01 REQUIREMENTS

- A. The Contractor shall comply with and be responsible for all the requirements of Division 1, General Requirements of the Project Manual, without exception.
- B. Provide and maintain barriers and lighted barriers for the protection of personnel and materials in accordance with the requirements of applicable state and local codes.
- C. Install barriers at the start of construction.

1.02 RELATED WORK

- A. Section 01510, Temporary Construction Controls

1.03 REGULATORY AGENCIES

- A. Comply with federal, state, and local, municipal regulations and with utility company and insurance agencies' requirements.

PART 2 – PRODUCTS

2.01 MATERIALS, GENERAL

- A. Materials and equipment must be adequate in capacity for the required usage, and not violate applicable codes and standards.
- B. Provide warning signs to help prevent damage and injury.
- C. Should it become necessary to remove safety items it shall be the Contractor's responsibility to replace the item immediately in conformance with applicable codes, standards and regulations.
- D. Wood materials used in barricades and barriers within any building and in material storage areas shall be fire-retardant.

2.02 BARRICADES

- A. Protect all vertical shafts with safe, temporary railings, adequately braced.
- B. Cover trenches and holes when not in use. Erect barriers at sharp changes in plane of more than 3 feet.
- C. Protect all building openings with safe, temporary railings adequately braced.

2.03 CONSTRUCTION FENCE

- A. Prior to starting Work at Project Site the Contractor, as may be directed by the Owner, shall install enclosure fence with locked entrance gates.
- B. Provide construction fence around material storage and construction areas to prevent unauthorized access. Comply with local, municipal and / or Georgetown County requirements for construction barriers.
- C. Provide minimum number of gates, padlocked during non-working hours as may be directed by the Owner.
- D. Locate personnel gates as necessary to provide controlled entry from construction parking to construction area, as may be directed by the Owner.

2.04 CONSTRUCTION LIGHTING

- A. Provide construction lighting throughout construction areas as may be required and necessary to maintain safety and security.
- B. Maintain lighting on a daily basis, including weekends, holidays, and foul-weather days so that the Project Site is adequately lighted at all times in the interest of safety and security.

PART 3 – EXECUTION

3.01 REMOVAL

- A. Contractor shall, at his/her sole cost, completely remove barricades, including barricades foundations when construction has progressed to a point that they are no longer required, and when requested by the Owner.

3.02 CLEANING

- A. Clean and repair damage caused by the Work of this Section. Fill and grade the areas of the Site to required elevations and slopes, and clean the area.

END OF SECTION 01530

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.

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 01600

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents of the Project Manual without exception.
- B. Division 1, General Requirements of the Project Manual without exception.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Construction Contract.
- B. Procedural requirements governing the Contractor's selection of products and product options are included under Section 01610, Materials and Equipment.

1.3 DEFINITIONS

- A. Definitions used in this Section are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "Substitutions". The following are not considered substitutions:
 - 1. Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the Construction Contract Documents and are not subject to requirements specified in this Section for substitutions.
 - 2. Revisions to Construction Contract Documents requested by Georgetown County.
 - 3. Specified options of products and construction methods included in Contract Documents.
 - 4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.4 SUBMITTALS

- A. Substitution Request Submittal: Requests for substitution will be considered if received within thirty (30) calendar days after commencement of the Work. Requests received more than thirty (30) calendar days after commencement of the Work may be considered or rejected at the discretion of the Owner.
 - 1. Submit three (3) copies of each request for substitution for consideration. Submit requests in the form to be provided by the Owner and in accordance with procedures required for Change Order proposals to be established by the Owner
 - 2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Technical Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:

- a. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
 - b. Samples, where applicable or requested.
 - c. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
 - d.. A statement indicating the substitution's effect on the Contractor's Construction Progress Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 - e. Cost information, including a proposal of the net change, if any in the Contract Sum.
 - f. Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Construction Contract Documents. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
3. Owner's Action: Within one (1) week of receipt of the request for substitution, the Owner may request additional information or documentation necessary for evaluation of the request. Within two (2) weeks of receipt of the request, or one (1) week of receipt of the additional information or documentation, whichever is later, the Owner will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be in the form of a Change Order.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: The Contractor's substitution request will be received and considered by the Owner when one or more of the following conditions are satisfied, as determined by the Owner, otherwise requests will be returned without action except to record noncompliance with these requirements.
1. Extensive revisions to Construction Contract Documents are not required.
 2. Proposed changes are in keeping with the general intent of the Construction Contract Documents.
 3. The request is timely, fully documented and properly submitted.
 4. The request is directly related to an "or equal" clause or similar language in the Construction Contract Documents.
 5. The specified product or method of construction cannot be provided within the Contract time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 7. A substantial advantage is offered the Owner in terms of cost, time, energy conservation or other considerations of merit after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect / Engineer of record for redesign, increased cost of other construction elements by the Owner or other separate Contractors, and similar considerations.
 8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.

9. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
 10. The specified product or method of construction cannot provide a warranty required by the Construction Contract Documents and where the Contractor certifies that the proposed substitution will provide the required warranty.
- B. The Contractor's submittal and the Owner's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
- C. Substitution request constitutes a representation that the Contractor:
1. Has investigated the proposed product and determined that it meets or exceeds, in all respects, the product specified.
 2. Will provide the same warranty for substitution as for the product specified.
 3. Will coordinate installation and make other changes, which may be required for work to be complete in all respects.
 4. Waives claims for additional costs, which may subsequently become apparent. All costs associated with the substitution will be paid for by the Contractor regardless of approvals given, and regardless of subsequent difficulties experienced as a result of substitutions.

PART 3 - EXECUTION

Not Used

END OF SECTION 01600

SECTION 01610

MATERIALS AND EQUIPMENT

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 the applicable requirement in this Section, and the requirements of Division 1, Section 01100 Summary of Work.
- C. Division 1, Section 01600, Product Requirements.
- D. Division 1, Section 01770, Closeout Procedures

1.02 RELATED WORK

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

1.03 SCOPE

- A. General storage and protection of project materials and equipment.
- B. Furnish, install and maintain storage sheds as required for protection of materials and equipment. Remove at completion of Work.
- C. Exterior storage requirements for all specified materials and equipment requiring protection.

1.04 MATERIAL AND EQUIPMENT INCORPORATED INTO WORK

- A. Comply with applicable specifications, manufacturer's recommendations and standards.
- B. Comply with size, make, type and quality specified or as specifically accepted in writing by the Owner.
- C. Design, fabricate, assemble deliver and install products in accordance with engineering and shop practices normal to trade.
- D. Manufacture like parts of duplicate units to standard interchangeable sizes and gauges. Two or more items of same kind shall be identical by same manufacturer.
- E. Products shall be suitable for intended purpose.
- F. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically accepted in writing.

- G. Do not use material or equipment for any purpose other than for which it is designed or is specified.

1.05 IDENTIFICATIONS AND NAMEPLATES

- A. Nameplates, trademarks, and other identifying marks on manufactured and fabricated items are not permitted on surfaces exposed to view in public spaces, including elevators and escalators except as noted otherwise in the Construction Contract Documents. This does not apply to UL labels.

1.06 QUALITY ASSURANCE

- A. Materials specified are to define standard of quality or performance and to establish basis for evaluation of proposals.
- B. Comply with individual Technical Specification Sections and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a Technical Specification Section shall be of same manufacturer and shall be interchangeable, unless otherwise required.

1.07 PRODUCT OPTIONS

- A. For Products specified only by reference standard, select Product meeting that standard by any manufacturer.
- B. For Products specified by naming only one Product and manufacturer, select any one of the products and manufacturers named which complied with the Technical Specifications.
- C. For products specified by naming only one Product and manufacturer, there is no option and no substitution will be allowed.

1.08 PRODUCTS LIST

- A. Within twenty (20) calendar days after award of Contract, submit to the Owner three (3) copies of complete list of major Products, which are proposed for installation.
- B. Tabulate Products by Technical Specification Section number and title.
- C. For products specified only by reference standards list for each such Product:
 - 1. Name and address of manufacturer.
 - 2. Trade name.
 - 3. Model or catalogue designation.
 - 4. Manufacturer's data:
 - a. Reference standards.
 - b. Performance test data.
- D. The Owner will coordinate with the Architect / Engineer of record and reply in writing stating whether there is reasonable objection to listed items. Failure to object to a listed item shall not constitute a waiver of the requirements of the Construction Contract Documents.

1.09 MANUFACTURER'S INSTRUCTIONS

- A. When Construction Contract Documents require installation of work to comply with manufacturers printed instructions, obtain and distribute copies of instructions to parties involved in installation, including two (2) copies to the Owner, prior to commencing work.
- B. Maintain one (1) set of complete instructions at job site during installation and until work is complete.
- C. Maintain copies for Project Record Documents.
- D. Handle, install, connect, clean, condition and adjust products in strict accord with manufacturer's instructions and in conformity with specified requirements.
- E. Should job conditions or specified requirements conflict with manufacturer's instructions, notify the Owner in writing for further instructions. Do not proceed with Work without clear instructions.
- F. Perform Work in accordance with manufacturer's instructions. Do not omit preparatory steps on installation procedures unless specifically modified or exempted by the Contract Documents.

1.10 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of materials and equipment in accordance with construction schedules. Coordinate to avoid conflict with Work and conditions at Site. Avoid congesting traffic.
- B. Deliver materials and equipment in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
- C. Immediately upon delivery, inspect shipments to assure compliance with requirements of the Construction Contract Documents and accepted submittals, and that products are properly protected and undamaged.
- D. Promptly remove unsatisfactory materials from Site.
- E. Furnish equipment and personnel to handle products by methods necessary to prevent soiling or damage to products or packaging.

1.11 STORAGE

- A. Store materials subject to damage from exposure to weather in weather tight storage facilities of suitable size with floors raised above ground. Materials not subject to weather damage may be stored on blocks off ground.
- B. Store fabricated products in accordance with manufacturer's instructions, seals and labels intact and legible. Store product subject to damage by elements in weather tight enclosures. Maintain temperature and humidity within ranges required by manufacturer's instructions.
- C. Cover materials, which are subject to deterioration with breathable, impervious sheet covering to provide adequate ventilation to avoid condensation.
- D. Store loosed granular materials in well-drained area on solid surfaces to prevent mixing with foreign matter and cover during inclement weather. Store cementitious and clay products clear of earth or concrete floors, away from walls.
- E. Arrange storage in manner to permit easy access for inspections.

- F. Protect metal from damage, dirt or dampness. Furnish flat, solid support for sheet products during storage.
- G. Make periodic inspections of stored materials to verify that products are maintained under specified conditions and are free from damage or deterioration.
- H. Do not use materials in work that have deteriorated, become damaged or are otherwise unfit for use.
- I. Store paints in assigned room or area kept under lock and key. Prevent mixing of refuse or chemically injurious materials or liquids with stored materials.
- J. Remove oil, rags and other combustible materials daily and take precautions to prevent fire hazard.
- K. Do not load structure during construction by storing materials with load greater than structure is calculated to support safely. Such storage is subject to approval by the Owner.
- L. Provide substantial platforms, blocking, or skids to support fabricated products above ground; slope to provide drainage. Provide surface drainage to prevent erosions and pounding of water.
- M. Pipe and conduit stored outdoors shall have open ends sealed to prevent entrance of dirt, moisture, etc.

1.12 PROTECTION AND MAINTENANCE

- A. Furnish protection against weather. Cover building openings and penetrations to protect interior of building from weather.
- B. Maintain work, materials, apparatus and fixtures free from damage, accumulation of debris, and protected from dust and dirt.
- C. Protect items having factory finish to prevent damage to finish and equipment.
- D. At end of day's work, cover new work likely to be damaged or otherwise protect and necessary.
- E. After installation, secure substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations.
- F. Remove protection where no longer needed. Upon completion of Work, remove storage facilities from site.
- G. Contractor shall replace, at no additional cost to the Owner, stored items damaged by inadequate protection and environmental control.
- H. For mechanical and electrical equipment in long-term storage, provide manufacturer's service instructions shown on exterior of package.
- I. Service equipment on a regular basis as recommended by manufacturer. Maintain log of maintenance services; submit log as Project Record Document in accordance with requirements of Section 01781, Project Record Documents.

- J. After cabinets and boxes are installed, cover openings to prevent entrance of water and foreign materials. Close conduit openings with temporary metal or plastic cap, including those terminated in cabinets.
- K. Provide temporary enclosures for equipment such as substations and motor control centers. Provide and maintain heat in closures until equipment is energized, to avoid condensation damage.

1.13 MANUFACTURER CERTIFICATION

- A. Prior to Final Acceptance of Work, for items designated in Technical Specifications Sections, an authorized representative of each manufacturer of materials and/or equipment installed under the work of that Section, shall personally inspect installation and operation of his/her materials, system and equipment to determine they are correctly installed and operating properly as follows:
 - 1. Inspection and testing shall be accomplished:
 - a. For Work which will be concealed during execution of Work, after completion of installation and prior to concealment.
 - b. For Work which will not be concealed, at completion of Work.
 - 2. Each representative shall submit a signed statement to the Owner through the Contractor certifying to his personal inspection and to the correct installation and proper operation of materials, systems and/or equipment. Their certification shall list all items included.
 - 3. Contractor shall transmit all such certifications to the Owner at or prior to Final Acceptance Inspection. Transmittal shall include a list of all certifications included.

PART 2 - PRODUCTS

2.01 MATERIALS, EQUIPMENT & FURNISHINGS

- A. Materials and equipment intended for use in Project must be new. Equipment and furnishings utilized for installation of material and equipment in the Project may be new or used, but must be serviceable, must be adequate for intended purpose, and must not violate applicable codes and/or regulations.

PART 3 - EXECUTION

3.01 GENERAL

- A. Store products immediately upon delivery at location acceptable to the Owner, in accordance with manufacturer's storage instructions, with seals and labels intact. Protect until uninstalled.
- B. Arrange storage in manner to provide access for maintenance of stored items and for inspection.

3.02 MAINTENANCE OF STORAGE

- A. Verify that storage facilities comply with manufacturer's product storage requirements.
- B. Verify that manufacturer required environmental conditions are maintained continually.

- C. Verify that surfaces of products to elements are not adversely affected and that any weathering of finishes is within acceptable tolerances under requirements of Construction Contract Documents.

END OF SECTION 01610

SECTION 01620

STORAGE AND PROTECTION

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. General storage and protection of project materials and equipment.
- B. Furnish, install and maintain storage sheds as required for protection of materials and equipment. Remove at completion of Work.
- C. Exterior storage requirements for all specified materials and equipment requiring protection.

1.02 RELATED REQUIREMENTS

- A. Division 1, General Requirements in the Project Manual without exception..

PART 2 – PRODUCTS

2.01 MATERIALS, EQUIPMENT & FURNISHINGS

- A. Materials and equipment intended for use in Project must be new. Equipment and furnishings utilized for installation of material and equipment in the Project may be new or used, but must be serviceable, must be adequate for intended purpose, and must not violate codes or regulations.

PART 3 – EXECUTION

3.01 GENERAL

- A. Store products immediately upon delivery at location acceptable to the Owner, in accordance with manufacturer's storage instructions, with seals and labels intact. Protect until installed.
- B. Arrange storage in manner to provide access for maintenance of stored items and for inspection.

3.02 ENCLOSED STORAGE

- A. Store products subject to damage by elements in substantial weather tight enclosures or storage sheds of adequate dimensions.
- B. Maintain temperature and humidity within ranges stated in manufacturer's instruction.
- C. Provide humidity control and ventilation for sensitive products as required by manufacturer's instruction.
- D. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.
- E. Contractor shall replace, at no additional cost to the Owner, store items damaged by inadequate protection or environmental control.

- F. Provide substantial platforms, blocking, or skids to support fabricated products above ground; slope to provide drainage.
- G. For products subject to dislocation or deterioration from exposure to elements, cover with impervious sheet materials. Provide ventilation to prevent condensation below covering.
- H. Store loose, granular materials on clean, solid surfaces, or on rigid sheet materials, to prevent mixing with foreign matter.
- I. Provide surface drainage to prevent erosion and pounding of water.
- J. Prevent mixing of refuse or chemically injurious materials or liquids with stored material.
- K. Pipe and conduit stored outdoors shall have open ends sealed to prevent entrance of dirt, moisture, etc.

3.03 MAINTENACE OF STORAGE

- A. Periodically inspect stored products on a scheduled basis.
- B. Verify that storage facilities comply with manufacturer's product storage requirements.
- C. Verify that manufacturer required environmental conditions are maintained continually.
- D. Verify that surfaces of products exposed to elements are not adversely affected and that any weathering of finishes is within acceptable tolerances established by the applicable manufacturer.

3.04 MAINTENACE OF EQUIPMENT STORAGE

- A. For mechanical and electrical equipment in long-term storage, provide manufacturer's service instructions shown on exterior of package.
- B. Service equipment on a regular basis as recommended by manufacturer. Maintain log of maintenance services; submit log in accordance with requirements of Section 01781, Project Record Documents

3.05 PROTECTION OF INSTALLED EQUIPMENT

- A. After cabinets and boxes are installed, cover openings to prevent entrance of water and foreign materials. Close conduit openings with temporary metal or plastic cap, including those terminated in cabinets.
- B. Provide temporary enclosures for equipment such as substations and motor control centers. Provide and maintain heat in closures until equipment is energized, to avoid condensation damage.

END OF SECTION 01620

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

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. Asphalt Pavement.
 - b. Concrete Pavement
 - c. Storm Water Treatment System
- B. Project Record (Permit) Documents, in accordance with Section 01781
- C. Warranties should be for one year after completion of work and bonds shall be maintained until project is accepted by owner.
- 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

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 MAINTENACE 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.
 - 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

SECTION 01790

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

- A. Division 0, Bidding and Contract Documents of the Project Manual without exception.
- B. Division 1, General Requirements of the Project Manual without exception.
- C. Approved Technical Specifications, as applicable and required.

1.02 SUMMARY

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Construction Contract Documents, including manufacturer's standard warranties on products and special warranties.
 - 1. Refer to the applicable requirements of Division 0 and Division 1 for Contractor's special warranty of workmanship and materials.
 - 2. General closeout requirements are included in Section 01770, Closeout Procedures.
 - 3. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual and applicable Sections of the Technical Specifications.
 - 4. Certifications and other commitments and agreements for continuing services to the Owner, Georgetown County, South Carolina are specified elsewhere in the Construction Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products.

1.03 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Construction Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

- E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Construction Contract Documents.
- F. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to counter sign such commitments are willing to do so.

1.04 SUBMITTALS

- A Submit written warranties to the Owner prior to the date certified for Substantial Completion. If the Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner.
- B When a designated portion of the Work is completed and occupied or used by the Owner by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner within ten (10) calendar days of completion of that designated portion of the Work.
- C When a special warranty is required to be executed by the Contractor, or the prime and a subcontractor, supplier or manufacturer prepare a written document that contains appropriate terms and identification, ready for execution by the required parties, Contractor shall submit a draft to the Owner for approval prior to final execution.
- D Form of Submittal: At Final Completion, the Contractor shall compile two (2) copies of each required warranty and bond properly executed by the Contractor, or by the prime, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- E Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
- F Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
- G Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS, the Project title or name and location, Owner RFP / Bid number and the name of the Contractor.
- H When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

END OF SECTION 01790

END OF VOLUME I

VOLUME II - PROJECT MANUAL

SPECIAL PROVISIONS

JOB NUMBER
31811.01

Bid NUMBER
Bid #20-001

COUNTY
Georgetown

(1) REFERENCES:

For purposes of this Contract references to the Department shall refer to the Georgetown County Department of Public Services. References to the “Resident Construction Engineer”, “Director of Traffic Engineering” or “Engineer’s Representative” shall refer to Georgetown County.

(2) STANDARDS AND REFERENCES:

This project is to be constructed under the SCDOT 2007 Standard Specifications for Highway Construction, the 2009 SCDOT Standard Drawings, the SCDOT 2004 Construction Manual, the SCDOT Supplemental Technical Specifications in effect at the time of the letting, and the following Special Provisions:

The above noted publications are available on the internet as follows, or may be obtained from the SCDOT Engineering Publications office at (803) 737-4533 or via e-mail at engrpubsales@dot.state.sc.us

SCDOT 2007 Standard Specifications for Highway Construction	https://www.scdot.org/business/pdf/2007_full_specbook.pdf
2009 SCDOT Standard Drawings	https://www.scdot.org/business/standard-drawings.aspx
SCDOT 2004 Construction Manual	https://www.scdot.org/business/scdot-construction-manual.aspx
SCDOT Supplemental Technical Specifications	https://www.scdot.org/business/road-technical-specs.aspx
South Carolina Manual on Uniform Traffic Control Devices (SCMUTCD)	https://mutcd.fhwa.dot.gov/

For purposes of this Contract references to the Department shall refer to Georgetown County. References to the “Engineer”, “Resident Construction Engineer”, Director of Traffic Engineering” or “Engineer’s Representative” shall refer to The County Engineer.

(3) ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION:

See attached Supplemental Specification dated May 4, 2009.

(4) SUBMITTALS:

All submittals, regardless of origin, shall be stamped with the approval of the Contractor and identified with the name and number of this Contract, Contractor's name, and references to applicable specification paragraphs and Contract Drawings. Each submittal shall indicate the intended use of the item in the work. When catalog pages are submitted, applicable items shall be clearly identified and inapplicable data crossed out. The current revision, issue number, and date shall be indicated on all drawings and other descriptive data.

The Contractor shall be solely responsible for the completeness of each submittal. Contractor's stamp of approval is a representation to the Owner and Engineer that the Contractor accepts sole responsibility for determining and verifying all quantities, dimension, field construction criteria, materials, catalog numbers, and similar data, and that the Contractor shall reviewed and coordinated each submittal with the requirements of the work and the Contract Documents.

Engineer's review of submittals covers only general conformity to the Drawings and Specifications, external connections, and dimensions that affect layout; it does not indicate thorough review of all dimensions, quantities, and details of the material, equipment, device, or item covered. Engineer's review shall not relieve Contractor of sole responsibility for errors, omissions, or deviations in the drawings and data, nor of Contractor's sole responsibility for compliance with the Contract Documents.

Engineer's submittal review period shall be the consecutive number of calendar days as required (30) and shall commence on the first calendar day following receipt of the submittal in the Engineer's office. The time required to mail the submittal back to the Contractor shall not be considered a part of the submittal review period.

The contractor may be required to submit submittals through an online program at no additional cost to the contractor

(5) MANUFACTURERS MATERIALS CERTIFICATIONS AND CERTIFIED TEST REPORTS:

The contractor shall supply the Resident Engineer with all required materials certifications and manufacturers test reports for items to be permanently incorporated into the project. These material certifications shall be provided prior to the materials use in the project. The Authority will supply the Resident Engineer with a list of required certifications and manufacturers tests based on the pay items and special provisions included in the proposals. The County Project Manager must approve these certifications and reports before payment can be made to the contractor for these items.

(6) REQUIRED MEDIA NOTIFICATION FOR CONSTRUCTION PROJECTS:

Contractors are encouraged to cooperate with the news media since all projects are constructed with public funds. Because the scope of this project will cause disruption of normal traffic flow, the contractor is required to notify the public, in a timely manner, of disruptive activities such as lane closures.

The Contractor is required to utilize area media to accomplish public notification of traffic disruptions.

The Contractor is required to deal directly with the news media and all reasonable efforts should be made to cooperate with the media. However, the safety, security and construction schedule on site should not be disrupted in order to accomplish this.

(7) AS-BUILT CONSTRUCTION PLANS:

See attached Supplemental Specification dated April 1, 2008.

The Contractor shall submit an electronic version of the as-builts in AutoCAD (.dwg) format.

(8) SECTION 101: STANDARD DRAWINGS:

The Bidders are hereby advised that this project shall be constructed using the Current Standard Drawings with all updates effective at the time of the letting. The Standard Drawings are available for download at http://www.scdot.org/doing/sd_Disclaimer.aspx. All drawings that are updated are labeled with their effective letting date in red.

The Standard Drawings are available to purchase through the SCDOT Engineering Publications Sales Center. The Engineering Publication Sales Center is located in Room 122 (College Street Entrance) of the SCDOT Headquarters Building, 955 Park Street, Columbia, South Carolina.

All references in the plans, standard specifications, supplemental specifications, supplemental technical specifications or special provisions to drawings under the previous numbering system are hereby updated to the new drawing numbers. Refer to sheets 000-205-01 through 000-205-07 to find new drawing numbers when looking for references to older drawing numbers. "Old sheet numbers" are also visible on the website when using the full set of drawings "current" search and are sortable by clicking the header over the appropriate column on the results page. Be aware that some older drawings now span over multiple pages due to detailing changes.

(9) SECTION 102: IMMINENT STANDARD DRAWINGS:

On the Standard Drawings search page, enter status of Imminent with other fields blank to see a list of upcoming Standard Drawings and their corresponding effective let date. Imminent drawings may be used at any time they are available if approved by the Resident. Follow procedure shown in imminent drawings when noted in this section.

No imminent drawings are currently required on this project, but contractor is encouraged to review available imminent drawings for bidding upcoming projects.

(10) SECTION 102: STANDARD DRAWING ERRATA:

The Bidders are hereby advised that the following note changes apply to the published Standard Drawings.

On sheet **000-205-05**, add the following information under the columns below:

OLD DRAWING NAME	NEW DRAWING NAME
720-905-01 to 720-905-05	720-901-01 to 720-993-32

On sheet **605-005-05 (ver 1-1-2013)**, replace entire text of General Note #4 with the following text:

4. The square footage of sign panels attached to 2½” x 2½” 12 gauge sign support secured to a 3” x 3” 7 gauge breakaway anchor shall not exceed 20 square feet.

On sheet **610-005-00 (ver 5-1-18)** added the following definition to Note 1 of Flagging Operations section:

SIDE ROAD FLAGGER – This flagger is stationed on an intersecting side road and controls the side road traffic entering into the roadway where the work activity area is located.

On sheet **610-005-20 (ver 5-1-18)** added Note 5 :

5. When the work proceeds through a “STOP sign controlled “SIDE ROAD” intersection continue the work operations through the intersection to a specific location point within the “DEPARTURE LANE” no less than 300 FT to 500 FT beyond the limits of the intersection to allow the work train and all portions of the lane closure to clear the intersection.

On sheet **610-005-20 (ver 5-1-18)**

Added dimension “300’-500’” for the work activity area after the intersection.

On sheet **610-005-30 (ver 5-1-18)** added Note 5 :

5. When the work proceeds through a “STOP SIGN CONTROLLED“ intersection continue the work operations through the intersection to a specific location point within the “DEPARTURE LANE” no less than 300 FT to 500 FT beyond the limits of the intersection to allow the work train and all portions of the lane closure to clear the intersection.

On sheet **610-005-40 (ver 5-1-18)** added Note 5 :

5. When the work proceeds through a “TRAFFIC SIGNAL CONTROLLED“ intersection continue the work operations through the intersection to a specific location point within the “DEPARTURE LANE” no less than 300 FT to 500 FT beyond the limits of the

intersection to allow the work train and all portions of the lane closure to clear the intersection.

On sheet **610-005-50 (ver 5-1-18)** added Note 5 :

5. When the work proceeds through a “TRAFFIC SIGNAL CONTROLLED“ intersection continue the work operations through the intersection to a specific location point within the “DEPARTURE LANE” no less than 300 FT to 500 FT beyond the limits of the intersection to allow the work train and all portions of the lane closure to clear the intersection.

On sheet **610-005-60 (ver 5-1-18)** Title block changed :

Title block now reads “Flagging Operations – Work Zones Beginning @ Intersections with Two-Lane Two-Way Roadways – Departure Lane.”

On sheet **610-005-70 (ver 5-1-18)** Title block changed :

Title block now reads “Flagging Operations – Work Zones Terminating @ Intersections with Two-Lane Two-Way Roadways – Approach Lane.”

On sheet **610-005-80 (ver 5-1-18)** Note 6 revised:

6. Dependent upon the location of the work zone in the “Departure Lane” or the “Approach Lane” of the two-lane two-way road, when the work zone progresses to a location that requires conversion from this flagging operation traffic control setup to a standard flagging operation traffic control setup or vice versa, comply with the requirements of Standard Drawing No. 610-005-60 or Standard Drawing No. 610-005-70 as necessary regarding these conversions.

On sheet **610-005-90 (ver 5-1-18)** Note 6 revised:

6. Dependent upon the location of the work zone in the “Departure Lane” or the “Approach Lane” of the two-lane two-way road, when the work zone progresses to a location that requires conversion from this flagging operation traffic control setup to a standard flagging operation traffic control setup or vice versa, comply with the requirements of Standard Drawing No. 610-005-60 or Standard Drawing No. 610-005-70 as necessary regarding these conversions.

On sheet **720-305-00 (ver May 2008)**, delete the entire note directly above main detail:

On sheet **720-405-00 (ver May 2009)** Detail 2 replace dimension 2’-6” maximum with:

2’-6” minimum

On sheet **720-901-01 (ver Feb 2015)** replace note 5.04 with:

5.04 When a mid-block crossing is required, consider mid-block staggered crossing (720-955-41) to encourage eye contact between the pedestrian and the oncoming

traffic. Always angle the stagger so that the pedestrian travels through the refuge facing the oncoming traffic.

On sheet 722-305-00 (ver May 2010) Detail 4 replace note “French Drain see note 21” with:

French Drain see note 4.5.

On sheet 722-305-00 (ver May 2010) table 722-305A, 4th column, change the following:

Delete (~~SF~~)

Replace text “up to 36” with “up to 3’X3’ “

Replace text “larger than 36” with “larger than 3’X3’ ”

On sheet 804-105-00 (ver May 2008) Title Block replace text “Rirap (Bridge End)” with:

Riprap (Bridge End)

On website, sheets designated as 805P* (Pre-MASH) are available for use when MASH eligible devices are not available. Connect these devices to strong post details of the pre-MASH standards available in the 2016 edition of the SCDOT Standard Drawings.

On sheet 805P-655-M1 (ver Jan 2011) replace note 30.4 with the following:

30.4 Install adhesive anchors to a depth sufficient to develop a minimum factored (reduced) ultimate tensile capacity of 21 kips per anchor bolt. Increase minimum embedment shown in detail 4 as required by adhesive manufacturer’s recommendations for the existing material properties, anchor bolt pattern, edge conditions, and any other design reduction.

(11) SECTION 103.8: CONTRACTOR'S LIABILITY INSURANCE:

Section 103.8 is hereby deleted and replaced with the requirements of SECTION 00100, Item #29 of this Project Manual.

(12) SECTION 105: CONSTRUCTION STAKES, LINES, AND GRADES:

Section 105.8.2 applies to this project. Payment for this work shall be made according to the following schedule:

Percent Contract Complete	Percent of Stakes, Lines, and Grades bid amount to be paid
1-5	20
6-15	40
16-29	60
30-49	70
50-69	80
70-89	90

90-100	100
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(13) SECTION 106: QUALIFIED PRODUCT LISTINGS

All references to “Approval Sheet” or “Approval Policy” are to be replaced with “Qualified Products Listings (QPL)” and “Qualified Products Policies (QPP)” respectively. This change includes all references in the SCDOT Standard Drawings, SCDOT Standard Specifications, SCDOT Supplemental Specifications, SCDOT Special Provisions, SCDOT Supplemental Technical Specifications, SCDOT Internet and Intranet websites, and all other documents produced by SCDOT.

(14) SECTION 106: SOUTH CAROLINA MINING ACT:

See Attached Supplemental Specification Dated **March 20, 2003**.

This Supplemental Specification is hereby modified as follows:

Paragraph 9 is hereby deleted and replaced with the following:

The deputy secretary for engineering, or his duly appointed representative, will make a final inspection of the reclaimed area and keep a permanent record of his approval thereof. A map or sketch providing the location and approximate acreage of each pit used on the project will be provided to the resident construction engineer for inclusion in the final plans.

The last paragraph is hereby deleted and replaced with the following:

The contractor shall comply with the provisions of the plan that are applicable to the project as determined by the engineer. Seeding or other work necessary to comply with the plan on pits furnished by the contractor shall be at the expense of the contractor. Seeding shall be in accordance with SC-M-810 (latest version) which can be found at http://scdot.org/doing/sup_tech_specs.shtml.

(15) SECTION 107: FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED:

Attention is directed to this Federal Legislation, which has been enacted into law. The contractor will be responsible for carrying out all of the provisions of this legislation, which may affect this contract.

(16) SECTION 107: CRANE SAFETY:

See attached Supplemental Specification dated August 1, 2013.

(17) SECTION 107: LATE DISCOVERY OF ARCHAEOLOGICAL/HISTORICAL REMAINS ON FEDERAL AID PROJECTS AND APPROVAL OF DESIGNATED BORROW PITS:

See attached Supplemental Specification dated August 7, 1991.

(18) SECTION 107: CONTRACT PROVISION TO REQUIRE CERTIFICATION AND COMPLIANCE CONCERNING ILLEGAL ALIENS

By submission of this bid, the bidder as the prime contractor does hereby agree:

- a. to certify its compliance with the requirements of Chapter 14 of Title 8 of the S.C. Code of Laws regarding Unauthorized Aliens and Public Employment;
- b. to provide SCDOT with any documents required to establish such compliance upon request; and
- c. to register and participate and require agreement from subcontractors and sub-subcontractors to register and participate in the federal work authorization program to verify the employment authorization of all new employees, or to employ only workers who supply the documents required pursuant to S.C.Code 8-14-20(B)(2).

(19) SECTION 107: COORDINATION OF UTILITY RELOCATION WORK WITH HIGHWAY CONSTRUCTION:

As it is not economically feasible to complete the rearrangement of all utility conflicts in advance of the highway construction, such rearrangements may be underway concurrently with construction.

It shall be the responsibility of the contractor to inspect the site for potential utility conflicts. Contractor shall understand utilities servicing roads affected by construction. Contractor shall verify with affected utilities their receipt of construction plans and in absence thereof, facilitate the distribution of plans. Contractor shall also coordinate with the Utilities to schedule and complete relocations that are required but not performed prior to the notice to proceed for the project.

It is the responsibility of the Contractor to call South Carolina 811 (811) three (3) days prior to work so that existing utilities can be properly marked.

(20) UTILITY ALLOWANCE

See attached Supplemental Specification for details.

(21) SECTION 108: CONSTRUCTION SCHEDULES:

See attached Supplemental Specification dated **November 4, 2014**.
Level 1 Schedule is required

(22) SECTION 108: NOTICE TO PROCEED

Unless otherwise specified in these documents, Section 108.2 is hereby revised to include the following:

A Notice to Proceed Date shall be determined at the Preconstruction Conference that will be held within thirty (30) calendar days of the Award Date. The Notice to Proceed Date shall not be more that forty-five (45) calendar days after the Date of Award unless

extenuating circumstances such as utility conflicts occur which are beyond the control of the Contractor as determined by the County.

(23) CONSTRUCTION ESTIMATES

See attached Supplemental Specification dated November 10, 1999.

(24) SECTION 109: RETAINAGE

There will be a 10% RETAINAGE held by the County until all work is complete in a satisfactory manner.

(25) INSTALL PIPE AND BOLLARD DESIGN DOUBLE GATE

Four (4) pairs of gates are to be installed at the IP Canal Access points or as directed by the Engineer. Gates shall be 8” diameter uprights and 4” cross members made of carbon steel and painted yellow. The typical fabricator is Andrews Fabricators. The contact is Gilbert Casselman, gilbert@andrewsfab.net, 843-382-5502. Other fabricators may be utilized to provide an equal product at the approval of the Engineer. Below is a picture of a typical gate.



(26) HAUL ROUTE DETAILS

Haul routes shall be submitted for approval prior to beginning construction. The County shall have final approval.

(27) SECTION 203: MUCK EXCAVATION

Any unsuitable material within 2’ horizontal feet of pavement limits. Mucking will be paid for by the cubic yard, 12” below existing ground outside of the existing gravel roadway. Material removed less than 12” in depth will be considered “stripping” and shall be included in the lump sum bid.

The unit price bid for mucking excavation, if required, shall include removing and disposing of unsuitable material that is more than 12” below existing ground, **and replacing the material with borrow material meeting the SCDOT specifications** and providing compaction in accordance with the SCDOT Specifications. This quantity shall

be paid per CY and calculated by x,y,z field measurements agreed upon by both Georgetown County and the Contractor. The quantity shall be agreed upon prior to the placement of any fill in the mucked area. Once the area is filled, no additional claim above the CY agreed upon will be allowed.

As stated above, excavation of less than 12" shall be considered "Stripping." Stripping of the top soils or other existing material as required up to 12" shall be considered part of the base lump sum bid as described in Special Provision #14 of this Contracts' Technical Specifications.

The contractor may be directed by the County to dispose of some or all of the unsuitable soil material at the County Landfill. The contractor may, at their discretion, utilize the back entrance to the Landfill via the IP Canal access road to the landfill, but will be solely responsible for maintaining this existing road. There will be no additional compensation for this.

(28) SECTION 208: FINE GRADING

See attached Supplemental Specification dated **April 8, 2009**.

(29) SECTION 400: ASPHALT BINDER AND ADDITIVES:

See attached Supplemental Specification dated **March 1, 2016**.

(30) SECTION 401: REMOVAL OF EXISTING ASPHALT PAVEMENT BEFORE PATCHING

See attached Supplemental Specification dated **January 1, 2018**.

(31) SECTION 401: ASPHALT BINDER ADJUSTMENT INDEX:

See Attached Supplemental Specifications Dated August 7, 2013. For this project the Basic Bituminous Material Index will be determined on the first calendar day of the month in which this project is let. The index and adjustment table will be available on the internet at www.scdot.org/doing/monthlyindexes.asp, or may be obtained from the office of the Contracts' Administrator

All items of work included in this project, that are listed in the table entitled "Items of Work Eligible for A.C. Binder Adjustments" below paragraph 4 of the Supplemental Specification, will be subject to price adjustment..

(32) SECTION 401: TRANSPORTATION AND DELIVERY OF MIXES:

See attached Supplemental Specification dated **July 1, 2010**.

(33) SECTION 600: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES:

"The Contractor is hereby advised that the Department has adopted the MUTCD 2003 - Manual on Uniform Traffic Control Devices for use on all projects. All references to the South Carolina Manual on Uniform Traffic Control Devices (SCMUTCD) are hereby revised to read "MUTCD - 2003 Edition"."

(34) SECTION 600: TRAFFIC CONTROL HOLIDAY LANE RESTIRCTIONS:

See attached Supplemental Specification dated **September 1, 2015**.

(35) SECTION 600: ROADWAY CLOSURES

Brick Chimney Road may be closed from Johnson Rd (S-22-318) to Browns Ferry Road (SC-51) There shall be no public vehicular traffic or heavy construction traffic allowed on the pavement section before it is completed. Maintaining limited access to the IP Canal, the hunting club, timber harvesting (if required), and utility substation is required. A detour plan must be submitted to the county for approval. The cost of installing and maintaining the detour shall be included in the Traffic Control bid item.

(36) SECTION 600, Et al.: ADHESIVELY BONDED ANCHORS AND DOWELS:

See attached Supplemental Specification dated **September 1, 2008**.

This Supplemental Specification applies when Adhesively Bonded Anchors or Dowels are called for in the Plans or Detailed Drawings.

The following Standard Drawings have been identified as showing Adhesively Bonded Anchors or Dowels:

605-205-03	Temporary Concrete Barrier
605-210-04	Temporary Concrete Barrier
605-310-01	Temporary Concrete Barrier
605-315-00	Temporary Concrete Barrier
605-320-00	Temporary Concrete Barrier
605-325-00	Temporary Concrete Barrier
605-330-00	Temporary Concrete Barrier
651-105-00	Barrier Mounted Sign Post
657-100-00	Overhead Sign Support Roadway Bridges
722-105-01	Box Culvert (Used to connect headwall, wingwalls, and for extensions)
805-120-00	Guardrail (W Beam) Base Plate Connection
805-405-03	Guardrail (Tubular Beam) Bridge Railing
805-405-04	Guardrail (Tubular Beam) Bridge Railing

806-505-00	Fence (Ornamental Steel Picket)
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It is the contractor’s responsibility to determine if Adhesively Bonded Anchors or Dowels are a part of the project, and to comply with the provisions of the Supplemental Specification.

(37) SECTION 600: TRAILER MOUNTED AUTOMATED FLAGGER ASSISTANCE DEVICE SYSTEM

(AFAD):

See attached Supplemental Specification dated September 1, 2012.

(38) SECTION 600: WORK ZONE TRAFFIC CONTROL TRAINING REQUIREMENTS FOR CONTRACTORS / SUBCONTRACTORS:

See attached Supplemental Specification dated September 1, 2013.

(39) REMOVING STOP CONTROL AT BRICK CHIMNEY AND JOHNSON RD:

The intersection must first be converted to all-way stop control as detailed in the Two-Way to All-Way Section (see below). The news release that accompanies the change should indicate the intent is to change stop control from one street to another.

Two-Way to All-Way

Approximately two weeks prior to the date of the intended establishment of all-way STOP control, signs (R24-1-36), should be erected on all intersection approaches giving notice that an all-way stop will be effective on a specific date. The signs may be erected below or adjacent to the STOP signs on the stop approaches (Johnson Rd and Brick Chimney westbound) and 100 feet to 200 feet in advance of the intersection on the through (uncontrolled) approaches (Brick Chimney eastbound).

An explanation of the change should be provided by public notice to the local news media approximately one week in advance of the date the change is to be implemented.

On the day the change is to be implemented, the following actions should be undertaken in the order listed.

1. Erect STOP AHEAD signs on the new stop approaches and STOP signs at the new stop locations (Brick Chimney eastbound). All STOP signs should be complimented by ALL-WAY (R1-4) (R1-3P in 2009 MUTCD) sign panels below each STOP sign. Signs giving notice of the effective date of the all-way stop may then be removed. Flags and NEW (W16-20-24) (W16-15P in 2009 MUTCD) plates should be utilized on the STOP AHEAD warning signs for the previously uncontrolled approaches.

2. Apply stop limit lines at the new stop approaches and, if needed, replace the existing stop limit lines on the other stop approaches. Do not replace existing markings if they must be removed in a subsequent step.
3. If overhead flashers exist, the lens covers should be revised to reflect the change in right-of-way control.

If STOP AHEAD signs would not normally be required on the new stop approaches, they may be removed after six months.

All-Way to Two-Way

After a minimum of two weeks of all way stop control, follow the process below to convert intersection to two-way stop control.

On the approaches from which stop control is to be removed, erect signs having the message TEMPORARY (M4-7-24) beneath the STOP signs and above the ALL-WAY signs approximately two weeks prior to the date the change is to be implemented (Brick Chimney eastbound and westbound).

An explanation of the change should be provided by public notice to the local news media approximately one week in advance of the date the change is to be implemented. On the date of the change the following actions should be done:

1. Erect signs having the message CROSS TRAFFIC DOES NOT STOP (W4-4P) below or adjacent to the STOP signs on approaches that are to remain stop approaches (Johnson Road southbound). Then remove the STOP signs and the STOP AHEAD signs on the new through street (Brick Chimney eastbound and westbound). Finally, pavement marking on the new through street (Brick Chimney) should be corrected by removing any stop limit lines that exist.
2. If overhead flashers exist, the lens covers should be revised to reflect the change in right-of-way control.

Signs with the message CROSS TRAFFIC DOES NOT STOP should remain in place a minimum of two months after the date of the change (Johnson Road southbound).

(40) SECTION 600: TRAFFIC CONTROL

The Contractor shall execute the item of Traffic Control as required by the Standard Specifications, the plans, the Standard Drawings For Road Construction, these special provisions, all supplemental specifications, the MUTCD, and the Engineer. This is an amendment to the Standard Specifications to require the following:

GENERAL REGULATIONS -

These special provisions shall have priority to the plans and comply with the requirements of the MUTCD and the standard specifications. Revisions to the traffic control plan through modifications of the special provisions and the plans shall require approval by the County or SCDOT where appropriate. **Final approval of any revisions**

to the traffic control plan shall be pending upon review by Georgetown County or SCDOT where applicable.

Due to the residential characteristics of these roads, Georgetown County reserves the right to restrict work on and around County recognized holidays, such as but not limited to Thanksgiving, Christmas, and Easter.

Install and utilize changeable message signs in all lane closures installed on high volume high-speed multilane roadways. Use of changeable message signs in lane closures installed on low volume low speed multilane roadways is optional unless otherwise directed by the plans and the Engineer. Install and use a changeable message sign within a lane closure set-up as directed by the *Standard Drawings For Road Construction*. When a lane closure is not present for any time to exceed 24 hours, remove the changeable message sign from the roadway. Place the sign in a predetermined area on the project site, as approved by the Engineer, where the sign is not visible to passing motorists. Utilize preprogrammed messages in accordance with the *Standard Drawings for Road Construction* when using the changeable message sign as part of the traffic control set-up for lane closures. Only those messages pertinent to the requirements of the traffic control situation and the traffic conditions are permitted for display on a changeable message sign at all times. At no time will the messages displayed on a changeable message sign duplicate the legends on the permanent construction signs.

During operation of changeable message signs, place the changeable message sign on the shoulder of the roadway no closer than 6 feet between the sign and the near edge of the adjacent travel lane. When the sign location is within 30' of the near edge of a travel lane open to traffic, supplement the sign location with no less than 5 portable plastic drums placed between the sign and the adjacent travel lane for delineation of the sign location. Install and maintain the drums no closer than 3 feet from the near edge of the adjacent travel lane. This requirement for delineation of the sign location shall apply during all times the sign location is within 30' of the near edge of a travel lane open to traffic, including times of operation and non-operation. Oversized cones are prohibited as a substitute for the portable plastic drums during this application.

All signs mounted on portable sign supports shall have a minimum mounting height of 5' from the ground to the bottom of the sign. All signs mounted on ground mounted u-channel posts shall have a minimum mounting height of 7' from the ground to the bottom of the sign.

When covering signs with opaque materials, the Department prohibits attaching a covering material to the face of the sign with tape or a similar product or any method that will leave a residue on the retroreflective sheeting. Residue from tape or similar products, as well as many methods utilized to remove such residue, damages the effective reflectivity of the sign. Therefore, contact of tape or a similar product with the retroreflective sheeting will require replacement of the sign. Cost for replacement as a sign damaged by improper covering methods will be considered incidental to providing and maintaining the sign; no additional payment will be made.

Signs not illustrated on the typical traffic control standard drawings designated for permanent construction signs shall be considered temporary and shall be included in the lump sum price bid item for "Traffic Control" unless otherwise specified.

Install and maintain any necessary detour signing as specified by the typical traffic control standard drawings designated for detour signing, Part VI of the MUTCD, these Special Provisions, and the Engineer. The lump sum price bid item for "Traffic Control" includes payment for installation and maintenance of the detour signing.

The Contractor shall maintain the travel patterns as directed by the traffic control plans and shall execute construction schedules expeditiously. The Contractor shall provide the Resident Engineer with no less than a two-week prior notification of changes in traffic patterns.

During nighttime flagging operations, flaggers shall wear a safety vest and safety pants that comply with the requirements of ANSI / ISEA 107-2004 standard performance for Class 3 risk exposure or latest revisions and a fluorescent hard hat. The safety vest and the safety pants shall be retroreflectorized and the color of the background material of the safety vest and safety pants shall be fluorescent orange-red. Night time work shall be prohibited in residential areas.

During nighttime flagging operations, the contractor shall illuminate each flagger station with any combination of portable lights, standard electric lights, existing street lights, etc., that will provide a minimum illumination level of 108 Lx or 10 fc.

During nighttime flagging operations, supplement the array of advance warning signs with a changeable message sign for each approach. These changeable message signs are not required during daytime flagging operations. Install the changeable message signs 500' in advance of the advance warning sign arrays. Messages should be "Flagger Ahead" and "Prepare to Stop".

The Contractor shall maintain local traffic on the Road during construction.

ADDENDUMS

Traffic Control Pay Items

(Addendums to the “2007 Standard Specifications for Highway Construction”)

(A) Trailer Mounted Changeable Message Signs –

Sub-section 606.5 Measurement (paragraph 2) –

Trailer-mounted changeable message signs are included in the lump sum item for Traffic Control in accordance with **Subsections 107.12** and **601.5** of the “2007 Standard Specifications for Highway Construction”. No separate measurement will be made for trailer-mounted changeable message signs unless the contract includes a specific pay item for trailer-mounted changeable message signs.

The Contractor shall provide, install, operate, and maintain the trailer-mounted changeable message sign per traffic control set-up as directed by the Plans, the “Standard Drawings for Road Construction”, these Special Provisions, the Specifications, and the Engineer.

Sub-section 606.6 Payment (paragraph 2) –

In addition to **Subsections 107.12** and **601.6**, the payment for Traffic Control is full compensation for providing, installing, removing, relocating, operating, and maintaining trailer-mounted advance warning arrow panels and trailer-mounted changeable message signs as specified or directed and includes providing the units’ primary power source; repairing or replacing damaged or malfunctioning units within the specified time; providing traffic control necessary for installing, operating, and maintaining the units; and all other materials, labor, hardware, equipment, tools, supplies, transportation, incidentals, and any miscellaneous items necessary to fulfill the requirements of the pay item in accordance with the Plans, the Specifications, and other items of the Contract.

Sub-section 606.6 Payment (paragraph 3) –

Disregard this paragraph unless the Contract includes a specific pay item for trailer-mounted changeable message signs.

TYPICAL TRAFFIC CONTROL STANDARD DRAWINGS -

The typical traffic control standard drawings of the “Standard Drawings for Road Construction”, although compliant with the MUTCD, shall take precedence over the MUTCD. The typical traffic control standard drawings of the “Standard Drawings for Road Construction” shall apply to all projects let to contract.

Install the permanent construction signs as shown on the typical traffic control standard drawings designated for permanent construction signing. The schemes shown below are recommended but may be varied by the County or SCDOT to meet field conditions.

Road	Scheme	Location	Total (SF)
Brick Chimney Road	C	1 Before Johnson Road	92
		1 on Johnson Road	92
		2 on Browns Ferry (SC 51)	184

(41) SECTION 605: PERMANENT CONSTRUCTION SIGNS:

Utility locations must be performed prior to the placement of Permanent Construction Signs. State Law requires that the location of each sign be marked with a white line in the roadway or a stake in the shoulder. The locator company will mark 25 feet on either side of the location. The responsibility for marking the sign locations prior to the contractor calling PUPS for utility locate lies with the party responsible for lines and grades on the project. If Construction Lines and Grades is a pay item, then the Prime Contractor is responsible for marking the sign location. If this is not included, it is the Department's responsibility to mark the locations.

Prior to marking the sign location, care must be taken when marking the signs to ensure that there are no obstructions or other mitigating factors that will cause the sign to be moved outside of the 50 foot utility window. Any costs associated with staking out the sign locations are considered incidental to the cost of Permanent Construction Signs. Requests for utility locates must be specific and isolated to the sign locations if no ground disturbing activities are occurring outside of the sign placement.

(42) SECTION 610: ASSISTANCE BY HIGHWAY PATROL AND LOCAL LAW ENFORCEMENT:

See attached Supplemental Specification dated July 1, 2018.

(43) SECTION 701: CONCRETE BATCHING AND MIXING:

See attached Supplemental Specification dated April 5, 2010.

(44) SECTION 701: CONCRETE BATCHING AND MIXING IN COLD AND HOT WEATHER:

See attached Supplemental Specification dated July 1, 2018.

(45) SECTION 701: PORTLAND CEMENT AND PORTLAND CEMENT CONCRETE:

See attached Supplemental Specification dated May 5, 2014.

(46) SECTION 702: CONCRETE STRUCTURES – PREFORMED JOINT FILLER:

See attached Supplemental Specification dated April 1, 2013.

(47) SECTION 703: REINFORCING STEEL:

See attached Supplemental Specification dated **July 1, 2018**.

(48) SECTION 714: SMOOTH WALL PIPE

REFERANCE: SCDOT Supplemental Technical Specification SC-M-714

Supplemental Technical Specification SC-M-714 shall apply to this project as it pertains to Reinforced Concrete Pipe with the following exceptions.

Upon prior written approval from the County, existing soil may be used as backfill from driveway pipes. If existing soil is used, each 8" lift shall be compacted and approved by Georgetown County prior to proceeding with the next lift. Pipes crossing the roadway shall be backfilled with material meeting the requirements of SC-M-714.

Section 1.3.10 Installation Inspection (RCP) subsection Post Construction (Acceptance) shall be deleted. No video inspection or laser profiler/Deflectometer testing will be required on this project.

Rubber profile gasket meeting AASHTO M 315 shall be used in all pipe joints.

(49) SECTION 720: CONCRETE MEDIAN/ISLANDS

Concrete Medians/Islands shall be installed per SCDOT Standard Drawing 720-105-03 and other pertinent standard drawings with the following exception. Standard 9" X 15" Curb will not be utilized. 2' vertical face curb per SCDOT Standard Drawing 720-105-01 will be utilized.

(50) SECTION 809: RIGHT OF WAY PLAT:

Description:

The contractor by the "Substantial Work Complete" date shall prepare a right of way plat signed and sealed by a Professional Land Surveyor (PLS) licensed to practice in the state of South Carolina. The right of way plat shall be in accordance with the requirements of Section 49-460-A "General Property Survey" as outlined in the South Carolina "Standards of Practice Manual" for land surveyors. A copy of the plat will be recorded, by the contractor, in the Register Mesne Conveyance "RMC) office of the county or counties in which the property resides. The contractor will provide one copy of the plat on a full sized plan sheet(s) (22" x 36") and submit to the resident construction engineer to be included in the as-built plans.

Materials: Rebar Cap R/W Marker

Materials used shall comply with those listed on SCDOT Standard Drawing Nos. 809-105-00 or 809-110-00.

Construction Requirements:

The PLS shall set right of way markers along all new right of way lines as well as along any present right of way being retained by the Department at intervals listed on the SCDOT Standard Drawings. Right of way markers shall not be placed at points common to side property lines and/or corners. In the event that the plan reflects a break in the right of way along a side property line the right of way marker will not be set without the side property line being retraced and established by way of survey. The PLS shall prepare a plat documenting the location of all Right of Way Markers set and reflecting the as-built station and offset from the plan alignment. The plat shall show the entire project corridor as an enclosed strip or parcel of land to include the mainline and all side roads as defined on the project plan.

Measurement and Basis of Payment:

The item Right of Way Plat is paid on a lump sum (LS) basis: and therefore, there is no specific measurement for this item. The unit price bid for Property Right of Way Plat shall include all costs for labor, materials, equipment, services of a PLS and any related fees or costs associated with producing a plat, recording the plat at the RMC office, and all required copies. Each marker placed in accordance with the Standard Drawings complete and accepted will be measured and paid at the unit price bid.

Item No.	Description	Unit
8091000	RIGHT OF WAY MARKER (REINFORCED CONCRETE)	EA
8091010	RIGHT OF WAY MARKER (REBAR AND CAP)	EA
8091050	RIGHT OF WAY PLAT	LS

(51) SECTION 815: EROSION CONTROL MEASURES:

See attached Supplemental Specification dated **January 1, 2018**.

(52) GRADATION OF FINE AGGREGATE FA-10M:

See attached Supplemental Specification Dated **May 1, 2008**.

(53) PROMPT PAYMENT CLAUSE:

See attached Supplemental Specification Dated **June 14 2000**.

Paragraph 2 of the Supplemental Specification shall be updated as below.

“The Contractor may withhold as retainage up to **ten (10%)** percent of a subcontractor’s payment until satisfactory completion of all work items of the subcontract. “Satisfactorily completion of all work items of the subcontract” shall mean when the SCDOT pays the Contractor for the last work item of the subcontract. The Contractor must release to the subcontractor any retainage withheld within seven (7) calendar days from the date the Contractor receives payment from SCDOT for the last work item of the subcontract”

(54) GEORGETOWN COUNTY WATER AND SEWER DISTRICT:

Relocations plans for GCWSD bound under a separate cover and created by others. All work associated with these plans shall meet current GCWSD specification and details.

(55) IP CANAL REQUIREMENTS:

The water flow in the canal cannot be impacted in any way during the project.

Access points to the IP Canal shall be restricted at all times.

The IP Canal Road is a gated and secured road. The general public shall not have access to the IP Canal. The road must remain secured at all times until the four gates are installed and secured at the new access points to the IP Canal.

May 4, 2009

ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

Make the changes listed below to correct errata in the SCDOT *2007 Standard Specifications for Highway Construction*:

DIVISION 100 GENERAL PROVISIONS

SECTION 101 DEFINITIONS AND TERMS

Subsection 101.2 Abbreviations and Acronyms

Amend the table of **SCDOT OFFICIALS AND OFFICES** as follows:

DELETIONS		REPLACEMENTS	
BDE*	Bridge Design Engineer	PSE*	Preconstruction Support Engineer
BDG E*	Bridge Design Geotechnical Engineer	GDSE*	Geotechnical Design Support Engineer
SHE*	State Highway Engineer	DSE*	Deputy Secretary for Engineering

*Wherever it appears in the text, replace the deleted abbreviation with the new abbreviation.

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS

Subsection 102.8 Irregular Bids

Paragraph 2, item E, first sentence; delete the word "the" after the word "When".

SECTION 105 CONTROL OF WORK

Subsection 105.6 Cooperation with Utilities

Paragraph 1, last sentence; change the word "THE" to "the".

DIVISION 200 EARTHWORK

SECTION 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Subsection 202.5 Measurement

Paragraph 5, second bullet; change the words "Brick sidewalk" to "Concrete, brick or stone sidewalks".

SECTION 204 STRUCTURE EXCAVATION

Subsection 204.2.1.2 Structure Excavation for Culverts

Paragraph 1, at the end of the first sentence; change "**Subsection 204.4**" to "**Subsection 204.5**".

DIVISION 400 ASPHALT PAVEMENTS

SECTION 401 HOT MIXED ASPHALT (HMA) PAVEMENT

Subsection 401.2.1.2 Liquid Anti-Stripping Agent

Paragraph 1, first sentence; delete the period at the end of the sentence and add "and SC-M-406."

Subsection 401.2.5 Material for Full Depth Patching

Paragraph 1, delete and replace with the following:

"Use an approved SCDOT Intermediate Type C mix for all Full Depth Patching."

Subsection 401.5 Measurement

After paragraph 10, add the following paragraph:

- 11 The measurement of Prime Coat is the number of gallons of asphalt material applied to the completed and accepted base course.

Subsection 401.6 Payment

After paragraph 12, add the following paragraph:

- 13 "The payment for Prime Coat is at the contract unit price for Prime Coat and includes compensation for all labor, equipment, tools, maintenance, and incidentals necessary to complete that work."

Subsection 401.6 Payment

Paragraph 13, **Table of Pay Items**

Change paragraph reference number "13" to "14" and add the following Pay Item:

Item No.	Pay Item	Unit
4010005	Prime Coat	GAL

SECTION 403 HMA SURFACE COURSE

Subsection 403.5 Measurement

Paragraph 1, first sentence; change "HMA Intermediate Course" to "HMA Surface Course".

Subsection 403.6 Payment

Paragraph 1, first sentence; change "HMA Intermediate Course" to "HMA Surface Course".

SECTION 407 ASPHALT SURFACE TREATMENT – DOUBLE TREATMENT

Subsection 407.5 Measurement

Paragraph 1, first sentence; add the word "is" after "(Double Treatment Type (1, 2, 3, 4, or 5))".

SECTION 408 ASPHALT SURFACE TREATMENT – TRIPLE TREATMENT

Subsection 408.5 Measurement

Paragraph 1, first sentence; add the word "is" after "(Triple Treatment Type (1 or 2))".

DIVISION 600 MAINTENANCE AND TRAFFIC CONTROL

SECTION 625 PERMANENT PAVEMENT MARKINGS FAST DRY WATERBOURNE PAINT

Subsection 625.2.2.4.11 Lead Content

Paragraph 1, first sentence; change 6% to 0.06%.

SECTION 627 THERMOPLASTIC PAVEMENT MARKINGS

Subsection 627.4.10 Inspection and Acceptance of Work

Paragraph 2, first sentence; change "period of 90 days" to "period of 180 days".

Subsection 627.4.10 Inspection and Acceptance of Work

Paragraph 2, second sentence; change "90-day observation period" to "180-day observation period".

Subsection 627.4.10 Inspection and Acceptance of Work

Paragraph 3, first sentence; change "90-day period" to "180-day period".

DIVISION 700 STRUCTURES

SECTION 709 STRUCTURAL STEEL

Subsection 709.4.3.5.2 Submittals and Notification

Paragraph 1, delete the last two sentences and replace them with, "The Department's review and acceptance are required before any field welding will be permitted."

Subsection 709.6.3 Pay Items (page 650)

Subsection heading number; change subsection heading number from "709.6.3" to "709.6.4".

SECTION 712 DRILLED SHAFTS AND DRILLED PILE FOUNDATIONS

Subsection 712.4.4 Dry Construction Method

Paragraph 2, last sentence in A; change "*Drilled Shaft Report*" to "*Drilled Shaft Log*".

Subsection 712.4.10.4 Excavation Cleanliness

Paragraph 1, last sentence; change "*Drilled Shaft Report*" to "*Drilled Shaft Log*".

Subsection 712.4.10.6 Shaft Load Test

Change first paragraph reference number from "2" to "1".

Subsection 712.6.10 Drilled Pile Set-Up

Insert paragraph reference number "1" to the left of the first paragraph.

SECTION 723 DECK JOINT STRIP SEAL

Subsection 723.1 Description

Insert paragraph reference number "3" to the left of the third paragraph.

SECTION 726 BRIDGE DECK REHABILITATION

Subsection 726.4.1 General

Insert paragraph reference number "1" to the left of the first paragraph.

Subsection 723.4.6 Full Depth Patching (page 790)

Subsection heading number; change subsection heading number from "723.4.6" to "726.4.6"

SECTION 727 CROSSHOLE SONIC LOGGING OF DRILLED SHAFT FOUNDATIONS

Subsection 726.6 Payment (page 807)

Subsection heading number; change subsection heading number from "726.6" to "727.6"

DIVISION 800 INCIDENTAL CONSTRUCTION

SECTION 805 GUARDRAIL

Subsection 805.5 Measurement

Paragraph 4; amend as follows:

"The quantity for the pay item 8053000 Additional Length Guardrail Post is the length of required post installed in excess of the standard length post based on the system being installed, measured by the linear foot (LF), complete, and accepted."

SECTION 815 EROSION CONTROL

Subsection 815.1 Description

Paragraph 1, first sentence; change "temporary flexible pipe" to "temporary pipe".

Subsection 815.5 Measurement

Paragraph 13; delete the first sentence and replace it with the following sentence:

"The quantity for Temporary Pipe Slope Drains is measured and paid for in accordance with **Subsections 803.5 and 803.6** respectively."

Subsection 815.5 Measurement

Delete paragraph 19.

Subsection 815.6 Payment

After paragraph 15, add the following paragraph:

- 16 Payment for Removal of Silt Retained by Silt Fence is full compensation for removing and disposing of sediment deposits accumulated by silt fences as specified or directed and includes all materials, labor, equipment, tools, supplies, transportation, and incidentals necessary to fulfill the requirements of the pay item in accordance with the Plans, the Specifications, and other terms of the Contract.

Subsection 815.6 Payment

Change original paragraph number "16" to "17".

Subsection 815.6 Payment

Pay Item table; change the Unit for Item No. 8156214 to "EA".

INDEX:

Amend as follows:

Page I-3, after "Bridge Deck Rehabilitation, measurement and payment:"

Delete page 807.

Page I-12, after "Letting:"

Replace page 19 with page 9.

Page I-13, after "Overhead Sign Structure:"

Replace page 488 with page 495.

Page I-15, after "Proof Rolling:"

Delete page 98.

Page I-18, after "Structural Steel, turned and ribbed bolts:"

Replace page 624 with page 625.

Page I-19, after "Waterproofing, bridge deck:"

Delete page 907.

Page I-20, after "Working Drawings:"

Replace page 543 with page 779.

March 20, 2003

THE SOUTH CAROLINA MINING ACT

The South Carolina Mining Act enacted by the General Assembly in 1973 requires that the Department adopt reclamation standards to govern activities of the Department and any person acting under contract with the Department, on highway rights-of-way or material pits maintained solely in connection with the construction, repair and maintenance of the public road systems in South Carolina.

STANDARD PLAN FOR THE RECLAMATION OF EXCAVATED AREAS ADOPTED BY THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Reclamation plans as stated herein shall include all areas disturbed in excavations of borrow and material pits, except planned inundated areas.

The final side slopes of areas excavated for borrow and material pits shall be left at such an angle so as to minimize erosion and the possibility of slides. The minimum slope in every case shall be not less than 3:1.

Small pools of water should not be allowed that are, or are likely to become noxious, odious, or foul to collect or remain on the borrow pit. Suitable drainage ditches, conduits, or surface gradient shall be constructed to avoid collection of noxious, odious, or foul pools of water unless the borrow pit is to be reclaimed into a lake or pond.

Borrow pits reclaimed to a lake or pond must have an adequate supply of water to maintain a water sufficient level to maintain a minimum water depth of four (4) feet on at least fifty (50) percent of the surface area of the lake or pond.

Excavated areas will be drained where feasible unless otherwise requested by the property owner where, in such instances, the property owner may wish to develop the excavated area for recreational purposes or for the raising of fish, or for other uses, in compliance with the South Carolina Mining Act.

Where material is stripped from the ground surface in relatively thin layers, the area, after excavation has been completed, will be thoroughly scarified and terraced and planted to establish satisfactory vegetation necessary to control erosion. Vegetative cover should be established on a continuing basis to ensure soil stability appropriate to the area. Conservation practices essential for controlling both on-site and off-site erosion and siltation must be established. A minimum of seventy-five (75) percent vegetative ground cover, with no substantial bare spots, must be established and maintained into the second growing season.

Excavated areas that are drained will be seeded to obtain a satisfactory vegetative cover. The side slopes of excavated area will be planted to vegetation.

The State Highway Engineer, or his duly appointed representative, will make a final inspection of the reclaimed area and keep a permanent record of his approval thereof. A map or sketch providing the location and approximate acreage of each pit used on the project will be made available to the Final Plans Engineer.

All applicable regulations of agencies and statutes relating to the prevention and abatement of pollution shall be complied with by the contractor in the performance of the contract.

The Contractor shall comply with the provisions of the Plan which are applicable to the project as determined by the Engineer. Seeding or other work necessary to comply with the plan on pits furnished by the contractor shall be at the expense of the contractor. Bermuda shall not be planted on ground surface pit areas. The quantity of fescue seed specified in Subsection 810.04 of the Standard Specifications shall be increased by fifteen (15) pounds in lieu of the deleted bermuda seed.

March 20, 2003

April 1,2018

AS-BUILT CONSTRUCTION PLANS

GENERAL

The Contractor shall produce and deliver to the Department the final As-Built plans for this contract. This set of As-Built plans is not intended to document final quantities, but is intended to show approved revisions to the contract design including but not limited to: revised roadway profiles and cross sections, revised typical sections, revised drainage installations, and any changes to the demolition and removal items and any other changes to the original design.

If any design changes occur during construction, the plan sheets (or any other “job site record document” with a seal”) revised after award of contract shall include a complete accounting and detail of the revisions and design changes. The P.E. responsible for the revisions shall seal each altered plan sheet (or any other “job site record document” with a seal). This documented information is to be part of the As-Built Plan requirements.

The As-Built plans shall be neat, legible and of the correct size. Bridge projects and any road projects which include Plan, Profile and Cross-Section Sheets shall be full size. In general, if the job was let with full size plans (22” x 36”), the As-Built shall be full size. All revisions to the original plans shall be delineated in red ink, located properly on the drawing, they shall be legible and true to scale. Every As-Built Plan, Profile and Cross-Section Sheet shall be designated as such by note or stamp “As-Built” in red. The As-Built Plans shall be bound in the same manner as they were let, not combined. In other words, if a project includes road and bridge work and each is bound separately, keep them separate for As-Built, each with its own AB201 cover sheet.

In submitting As-Built Plans, the Contractor shall be required to complete FORM AB205 or AB206 whichever is applicable, and submit the form with the required deliverables to the RCE. The items and notes on these forms that apply to this project establish the minimum requirements for As-Built Plans. These forms can be found on the SCDOT website at <http://www.scdot.org/doing/default.html>.

The final As-Built plans shall be submitted within forth-five (45) days following the substantial work complete date of the project.

MEASUREMENT

Measurement is to be on a lump sum basis.

PAYMENT:

Payment for this item is to be as follows:

50% of the contract amount is to be distributed over the duration of the project, and paid in amount proportional to the amount of contract work completed.

The remaining 50% of the contract amount is to be paid on the final estimate if As-Build plans meet the requirements to satisfaction of the Resident Engineer.

In no case is payment to be in excess of the original bid amount for this item.

The Bid Item for this work is as follows:

<u>Item Number</u>	<u>Item</u>	<u>Unit</u>
1090200	As-Built Construction Plans	LS

CRANE SAFETY

The contractor's attention is directed to the following Crane Safety criteria. All applicable items under the submittal list section shall be submitted to the Resident Construction Engineer (RCE) before any crane operations may begin. If any personnel or equipment is changed or added, all applicable items shall be updated and submitted to the RCE before continuing with crane(s) operations.

All contractors shall comply with the manufacturer specifications and limitations applicable to the operation of any and all cranes and derricks. Prime contractors and sub-contractors shall comply with the latest Occupational Safety and Health Administration (OSHA) regulations, adopted American National Standards Institute (ANSI) and American Society of Mechanical Engineers (ASME) crane standards, and other applicable standards including, but not limited to the following:

- OSHA 29 CFR 1926 Subpart CC "Cranes and Derricks in Construction"
- OSHA 29 CFR 1926.251 "Rigging Equipment for Material Handling"
- ASME B30.5-2007 "Mobile and Locomotive Cranes"
- ASME B30.8-2010 "Floating Cranes and Floating Derricks"
- ASME B30.22-2005 "Articulating Boom Cranes"
- ASME B30.26-2010 "Rigging Hardware"

Submittal List

1. **Crane Operators:** All crane operators shall be certified by the National Commission for the Certification of Crane Operators (NCCCO), National Center for Construction Education and Research (NCCER), or Crane Institute of America Certification (CIC).
 - a. Contractor shall submit a copy of the NCCCO, NCCER, or CIC certification for each crane operator prior to performing any crane operations on the job site. The original certification card shall be available for review upon request and must remain current within a 5 year expiration date for the duration of the job. (Contractors with a crane operator-in- training on the jobsite shall comply with all the OSHA Subpart CC requirements).
 - b. Contractor shall submit a copy of the current Crane Operators Medical Evaluation card (3 year expiration) in the form of NCCCO, NCCER or CIC Physical Examination form or equivalent meeting the ASME B30.5 requirement or a current USDOT Medical Examiner's Certificate card (2 year expiration). The original medical card or equivalent for all crane operators shall be available for review upon request.

2. **Competent Person:** The named competent person will have the responsibility and authority to stop any work activity due to safety concerns.

- a. Contractor shall submit the name and qualifications of the “Competent Person” as defined by OSHA Subpart CC responsible for all crane safety and lifting operations.

August 7, 1991

**LATE DISCOVERY OF ARCHAEOLOGICAL/HISTORICAL REMAINS ON
FEDERAL AID PROJECTS AND APPROVAL OF DESIGNATED BORROW PITS**

A. Late Discovery of Archaeological/Historical Remains on Federal Aid Projects.

1. Responsibilities:

The Contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations. If any such cultural remains are encountered, the Resident Construction Engineer shall be immediately notified and all work in the vicinity of the discovered materials or site shall cease until the Department's Staff Archaeologist or the State Highway Engineer directs otherwise.

2. Applicability:

This provision covers all areas of ground disturbance resulting from this federal - aid contract, including but not limited to road construction, Department designated borrow pits, Contractor furnished borrow pits, and/or staging areas.

3. Cost Reimbursement and Time Delays:

Any extra work required by A(1) above within the project right of way or on Department designated borrow pits (see below) will be paid for in accordance with Subsection 104.05 of the Standard Specifications. Extra contract time may be provided under Subsection 108.06 of the Standard Specifications for archaeological work within the project right of way or on designated borrow pits.

NOTE: On Contractor furnished borrow pits the contractor is not entitled to any additional time or money for delay on impact resulting from A(1) above or for extra work required by A(1) above. Therefore, contractors may wish to retain professional archaeological services to better ensure that borrow pit areas are cleared of archaeological/historical remains prior to use on Federal aid projects.

B. Approval of Designated Borrow Pits on Federal Aid Projects (Plant Sites which qualify as commercial are not included).

In instances where the Department specifically designates the location of borrow pits on project plans or in contract specifications for use on a Federal aid project, an archaeological survey will be performed by Department archaeologists prior to award of contract.

This provision also applies to designated disposal sites, staging areas, haul roads, and job site field offices.

CONSTRUCTION SCHEDULES

General

This supplemental specification addresses schedule requirements for SCDOT contracts. There are three levels of schedules. The level required is included in the Special Provision. The level of schedule is selected based on the design field review completed in the preconstruction phase or during estimate development.

Level 1 – Minimal Schedule Requirement

Level 2 Schedule – Standard Critical Path Method Schedule

Level 3 Schedule – Critical Path Method Schedule with Monthly Cumulative Payment Clause.

Level 1 Requirement:

Provide to the Resident Construction Engineer (RCE) a four-week look-ahead schedule identifying planned weekly work activities. Update the schedule every two weeks. The look-ahead schedule allows the RCE to schedule construction engineering and inspection personnel. The Department will not be responsible for delays which may be caused by the contractor's failure to abide by his schedule. Failure to submit the look-ahead schedule as specified may result in the withholding of partial payment estimates.

Provide the look-ahead schedule in Word or Excel format or as directed by the RCE.

The Contractor may provide a CPM schedule as indicated in Level 2 Schedule Requirements in lieu of the four-week look-ahead schedule as follows:

- *Notify, in writing, the RCE that a CPM schedule will be provided in lieu of a four-week look-ahead schedule. Provide timely notification so that the baseline schedule is submitted in accordance with Level 2 Schedule Requirements - Submission, Review, and Acceptance Process – Baseline Schedule.*
- *No payment will be made if the Contractor elects to provide a CPM as a Level 1 Requirement. Measurement and Basis of Payment will be according to the Level 1 Schedule.*
- *Election to provide a CPM schedule in lieu of a four-week look-ahead schedule will be for the duration of the project.*
- *Level 2 Schedule Requirements;*

For projects requiring a CPM schedule, the Contractor will provide and update a construction schedule to the SCDOT, which will be used as a quantitative basis for:

- *Monitoring and evaluating the Contractor's progress in completing contracted work;*
- *Evaluating requests for additional contract time;*
- *Budgeting for construction partial payment estimates; and*
- *Managing SCDOT engineering and inspection personnel.*

The Contractor's construction schedule shall encompass the entire contract period, and be developed consistent with the contract milestones and the contract maintenance of traffic plan.

Critical path activities shall be identified for the duration of the project. The schedule shall also include sufficient information as outlined in this supplemental specification to provide for monetary and quantitative tracking of the work by the SCDOT.

Include and reference in the schedule at the time of occurrence, all documentation and explanations supporting a time adjustment request.

Utilities

The schedule shall reflect the utility relocations noted in the contract documents and discovered during field review and include activities of appropriate duration, location, and logic, as provided by the Utility, for the utility work. Where utility durations are unknown, the Contractor shall provide a reasonable estimate of duration. Utility durations will be reviewed in the baseline approval process as outlined in the section “Submission, Review, and Acceptance Process.” Utility durations will be presented at the Preconstruction Conference for concurrence by the utility provider. In the event that the utility representative cannot provide concurrence at the Preconstruction Conference, the Contractor, the Resident Construction Engineer, and the utility provider shall work diligently to reach acceptable durations. If there is no concurrence or input from the utility provider concerning the Contractor’s utility durations within 15 calendar days following the Preconstruction Conference, the submission with the Contractor’s estimate of utility duration will be reviewed for baseline acceptance. Further utility duration changes beyond this point in time will be assessed in monthly schedule updates. Failure to include activities for any element of work or any known utility work will not relieve the Contractor from completing the work within the allotted contract time.

Schedule Submissions

Contractors shall maintain CPM schedules for all applicable projects using at a minimum Primavera Project Management 5.0 or Primavera Contractor 5.0. The Contractor shall coordinate with the Department’s District Scheduler to provide an exported schedule importable into the Primavera version used by the Department.

Templates for the CPM schedules are available to download at the SCDOT construction Extranet site located:

http://www.scdot.org/doing/constructionLetting_Extranet.aspx

When submitting schedules to the SCDOT, the Contractor shall assign file names to each schedule file (baseline and updates) according to the following conventions (dates are YYMMDD):

Type of Schedule Submitted:	Baseline	Update	As-Built
File Name Convention:	[Contract ID]b[Data Date]	[Contract ID]u[Data Date]	[Contract ID]ab[Data Date]
File Name Example:	32.82571b060201	32.82571u060201	32.82571ab060201

Note on Data Dates - The initial Baseline Construction Schedule shall have a data date equal to the Award Date and not include any work to date. Monthly schedule updates shall have a data date set 1 day beyond the most recent estimate period end date.

Extranet file names upon uploading shall include the contract ID.

All submissions shall be made within the time frames defined under “Submission, Review and Acceptance Process.”

Electronic Files: Upload each baseline construction schedule and monthly update submission to the SCDOT Construction Extranet site in .xer format.

The Extranet site location is:

http://www.scdot.org/doing/constructionLetting_Extranet.aspx

Provide an Adobe file of each baseline construction schedule, monthly update submission, and schedule narrative to the District Scheduler and the Resident Construction Engineer. The schedule Adobe file shall include the following columns in 11 inch x 17 inch format: Activity ID, Activity Name, Start, Finish, Schedule % Complete, Physical % Complete, Budgeted Total Cost, Actual Total Cost, Remaining Total Cost, At Completion Total Cost, Original Duration, Remaining Duration, At Completion Duration, Earned Value, Planned Value, Schedule Variance Index, and Total Float. Sort on “Start” prior to printing to Adobe.

Schedule Narrative: Submit a Schedule Narrative Report with the baseline and each monthly update schedule describing current project schedule status and identifying potential delays. This report will include a description of the progress made since the previous schedule submission and objectives for the upcoming 30 calendar days.

- 1) Address all previous schedule review comments;
- 2) The report shall indicate if the project is on schedule, ahead of schedule or behind schedule as compared to the accepted baseline. Include the Schedule Variance Index, planned value cost and earned value cost. If the project is ahead of schedule or behind schedule, the report shall include the specific number of calendar days. If the project is behind schedule, the report shall include a detailed recovery plan that will put the project back on schedule. The narrative shall compare the Substantial Completion milestone for the baseline with the update;
- 3) Describe the current critical path of the project including the lowest total float value and indicate if this has changed in the last 30 calendar days. Discuss current successes or problems that have affected either the critical path’s length or have caused a shift in the critical path within the last 30 calendar days. Identify specific activities, progress, or events that may reasonably be anticipated to impact the critical path within the next 30 calendar days, either to affect its length or to shift it to an alternate path;
- 4) List all schedule logic or duration changes that have been made to the schedule since the previous submission. Provide an explanation for any constraint used. For each change, describe the basis for the change and specifically identify the affected activities by identification number;
- 5) Scheduling assumptions (considerations for known and foreseeable constraints or restrictions such as weather, traffic, environmental, utility, safety, etc);
- 6) Identify activities, either in progress or scheduled to occur within the following 30 calendar days that require Department participation, review, approval, etc;
- 7) Identify any calendars used that are not DOT specific, and explain the details of those calendars;
- 8) Identify schedule settings used;

- 9) Identify activity expense item changes;
- 10) Minimized the use of lag. Where possible, use an activity to represent lag time. In no instance shall negative lag be used;
- 11) Description of how the schedule is organized (e.g. broken down by road or activity);
- 12) Explain any actual duration exceeding the original duration;
- 13) Explain out of sequence activities individually and the overall effect on the schedule;
- 14) Explain, individually, activities that failed to start in the previous 30 days;
- 15) Include the current contract completion date;
- 16) Include the current contract amount and sum of actual cost;
- 17) Include approved change orders. Explain the costs and schedule change associated with them;
- 18) Submit the narrative with a naming convention of [Contract ID]n[Data Date].doc (e.g. 32.82571n060201.doc). Contractor will upload the electronic copy [in .doc format] to the South Carolina Department of Transportation Construction Extranet site;
- 19) Explain the schedule impacts of all utility work, known or anticipated;

Schedule Details

SCDOT reserves the user_text1 and user_text2 fields

Data Date - The Baseline Construction Schedule shall have a data date equal to award date and not include any completed work to date. Monthly schedule updates shall have a data date set to one day beyond the most recent estimate period end date.

Milestones - Schedule shall identify the following milestones as a minimum:

- **Award Date:** The date the Contractor is notified by the Director of Construction that he is awarded the project.
- **Contract Execution Date:** The date the contract is signed by the Department.
- **Baseline CPM Acceptance:** Anticipated date the baseline schedule is accepted. No work will start prior to this milestone date.
- **Notice to Proceed Date (NTP):** the NTP date is determined in coordination between the Engineer and the Contractor.
- **Work Begin Date:** Actual date that on-site work commences. In the baseline CPM schedule, this is the anticipated work begin date by either the prime contractor or any subcontractor. Once work begins, status the schedule with the actual date recorded in SiteManager.
- **Interim Completion Dates or Interim Milestones:** When interim completion dates or interim milestones (associated with project stages) are included in the contract specifications.
- **Mobilization:** Preparations for and moving of equipment, etc., to the project site.
- **Start of Paving:** Date paving production and placement is to start. This includes any paving requiring a SCDOT certified inspector representing the Department.
- **Substantial Work Complete Date:** The point in the project when all pay items have been installed in reasonable conformance with the plans and specifications over the entire length of the project including tie-ins and all lanes of traffic are open to the public in their final configuration with the final applications of thermoplastic and raised pavement markers. The only remaining work to be performed is punch list items. Place a Finish On or Before constraint on this milestone equal to the completion date in the

contract. If a change order is completed for time, update the constraint to the adjusted completion date.

- **As-Built CPM Schedule Submission:** The point in time in which the final schedule submission is made.
- **Project Liability Insurance Expiration Date MM/DD/YY:** This date references the expiration of the insurance as defined in Section 103.8 of the Standard Specification for Highway Construction. Include the date that the project liability insurance expires in the milestone activity name. If the expiration renewal date is prior to the Contract Completion Date, place a “Finish On” constraint on the finish milestone. If the expiration renewal date is beyond the Contract Completion Date, place an “As Late As Possible” constraint on the finish milestone. There are no logic ties for this milestone. Inclusion of this date in the CPM schedule does not relieve the contractor of his responsibility to retain liability insurance as defined by the Standard Specifications for Highway Construction.

Activities –

- Each Activity shall be part of the logic driven network, be cost loaded using Expense Categories, and include a predecessor (except the first activity) and a successor (except the last activity).
- Each Activity Name shall include a verb and a noun and represent the work function.
- Activity Names shall include the location of the work when there are multiple activities of the same work in different locations of the project.
- Limit activity original duration to 30 calendar days.

As a minimum, and when applicable, the schedule shall include the following activities when related work is part of the contract.

- **Mobilization:** Provide the same number of mobilization activities as for payment in the proposal i.e.
 - **Mobilization Payment I**
 - **Mobilization Payment II**
- **Clearing & Grubbing:** Self-explanatory.
- **Utility Relocations:** The schedule must reflect the utility relocations noted in the contract documents and include activities of appropriate duration for the utility adjustments. Where utility durations are unknown, the Contractor shall provide a reasonable estimate of duration. Relate utility activities to the contract work activities that they effect or are affected by.
- **Cure Period:** The period of time between two activities needed for material curing. Examples include concrete and thermoplastic pavement markings. For this activity, use a seven day work week calendar.
- **Earthwork:** Unclassified & borrow excavation, compaction, fine grading, etc.
- **Drainage:** Pipe, catch basins, manholes, etc.
- **Base Course:** Graded aggregate base courses, cement modified bases, etc.
- **Paving:** Hot mix asphalt base, intermediate, and surface courses; Portland cement concrete pavements, etc.
- **Structures:** Bridges, box culverts, retaining walls, etc.

Where sufficient detail has not been provided in included activities to determine progress of work and forecast of inspection and cost, the Department will request additional activities be added. The Department requires retain logic be used in scheduling projects. Relationship ties of all out-of-sequence activities should be corrected to reflect the actual occurrence. The use of progress override is not permitted. The monthly schedule update narrative shall justify any logic change(s).

Suspend Dates - The use of suspended dates is prohibited. If the activity is disrupted, break out into additional activities and explain in narrative.

Activity Expected Finish Dates – Activity Expected Finish dates are prohibited.

Resources – The Department will not require any input to the resource component of the schedule by the Contractor.

Expenses – Contractor shall assign the SCDOT contract items as expenses to each activity. The information provided under Expenses is used to evaluate daily production rates. SCDOT contract items will be included as Expense Categories and will be made part of the SCDOT schedule template available to download from the construction Extranet site. These shall be the only expense categories associated with activities. Under expenses, populate the fields Budgeted Units, Price/Unit, and Actual Units. If a SCDOT contract item cannot be found in the most current template, SCDOT should be contacted. The template will then be updated and uploaded to the extranet by SCDOT.

Weather - Considerations for normal weather shall be addressed within the activity duration.

Calendars – Contractor shall assign an appropriate SCDOT calendar to each activity in the schedule. Alternate calendars may be assigned, but specifics of the alternate calendars must be justified in the baseline narrative. Contractor shall assign all calendars as project specific – NOT GLOBAL. Acceptance of the alternate calendars is subject to review by the SCDOT. Considerations for weather shall be addressed within the activities – calendars shall not be modified to account for weather considerations. While calendars have been created to address established seasonal restrictions, it is the Contractor’s responsibility to assure that all restrictions, as identified in the contract documents, are included. Where the Contractor elects to not utilize all available contract time in the baseline schedule submission, either by blocking out days in the calendar or including an activity for an extended period of no work, future delays against the time omitted will not warrant additional time.

The Baseline Construction Schedule shall not extend beyond the number of working days or contract completion date originally provided in the contract.

Cost Loading – All schedule activities shall be cost loaded using the contract bid items (Expense Categories), unit prices, and units (quantities) under “Expenses” in Primavera. Associated expenses shall correlate with the item of work covered by the activity.

Float – Float is not for the exclusive use or benefit of either the Department or the Contractor. Negative float in the original baseline schedule is not allowed.

Schedule Layout – Organize the schedule using a Work Breakdown Structure (WBS) consistent with the phasing and staging noted in the contract documents.

Default Values – Contractor shall use the following defaults, physical percent complete, retain logic, longest path critical activities, and under Admin Preferences, make Time Periods 8.0 hours/day, 40 hours/week, 172 hours/month, and 2,000 hours/year.

Submission, Review and Acceptance Process

Baseline Schedule –

Submission:

Regular Bid Projects:

Contractor shall submit a Critical Path Method (CPM) Contract Schedule and Narrative to the District Scheduler no more than 15 calendar days after execution of the contract or 15 days prior to the preconstruction conference, whichever is earlier. Once the initial baseline schedule is submitted, a preconstruction meeting date may be assigned by the RCE and Contractor. The CPM Schedule and Narrative shall be submitted via upload to the Extranet. Upon upload, the Contractor shall immediately notify the District Scheduler and the Resident Engineer via email that the CPM schedule has been submitted. The accepted CPM baseline schedule is paid for in the first available estimate period after contract execution.

A+B Bid Projects:

Contractor shall submit a Critical Path Method (CPM) Contract Schedule and Narrative to the District Scheduler no less than 15 calendar days prior to the preconstruction conference. Once the initial baseline schedule is submitted, a preconstruction meeting date can be assigned by the RCE and Contractor. The preconstruction meeting shall be assigned no earlier than 15 calendar days after the initial baseline submission. The CPM Schedule and Narrative shall be submitted via upload to the Extranet. Upon upload, the Contractor shall immediately notify the District Scheduler and the Resident Engineer via email that the CPM schedule has been submitted.

Review:

Upon receipt of the CPM Construction Schedule, SCDOT shall review and provide comments to the Contractor within 10 business days of receipt. The Contractor will have 5 business days to respond to SCDOT comments. This process will continue until the Engineer and the District Scheduler determines the construction schedule is acceptable.

The Contractor's representative familiar with the submitted schedule shall present and discuss their accepted schedule at the Preconstruction Conference. In the event the schedule has not been accepted (i.e. review process is ongoing), the most current schedule under review shall be presented.

Acceptance:

Acceptance of the submitted schedule by the SCDOT will establish the baseline schedule for the contract. This acceptance by SCDOT does not serve to excuse any omissions or errors in the

Contractor's schedule (i.e. activities not included in baseline will not be considered in any time extensions).

Review and acceptance of baseline schedule is required prior to start of work. Delays in reaching this acceptance will not constitute a basis for granting additional contract time. If there is no concurrence or input from the utility provider concerning the Contractor's utility durations within 15 days following the Preconstruction Conference, the submission with the Contractor's estimate of utility duration will be reviewed for baseline acceptance. Further utility duration changes beyond this point in time will be assessed in monthly schedule updates.

Monthly Updates –

Monthly updates shall be made no later than 15 calendar days following the most recent estimate period end date, whether or not an estimate was generated and shall have a data date one day beyond the most recent estimate period end date. If no work was completed during the estimate period, an update with the most current estimate period is required. Upon upload, the Contractor shall immediately notify the District Scheduler and the Resident Engineer via email that the CPM schedule has been submitted. Failure to submit timely updates will result in SCDOT evaluating contract status from the last submitted update schedule by adjusting the data date to the most current estimate period end date. Late update submittals may result in the Contractor being evaluated for preliminary delinquency in accordance with current version of the South Carolina Department of Transportation Standard Specifications for Highway Construction. Habitually late submittals may result in automatic delinquency. Failure to submit acceptable schedule updates as required will result in the withholding of the partial payment estimate regardless of preliminary delinquency. Updates shall include the following:

- Updated schedule to show actual progress on activities;
- Updated schedule to show actual costs on activities;
- Change orders that have occurred during the last estimate period;
- Any task dependent activity greater than 30 days in actual duration that has not incurred additional costs since the last update shall be terminated and broken into additional activities. Document the activity change and reason for late completion in the narrative;
- Remaining costs on completed activities are zeroed (if remaining costs are redistributed, indicate in the narrative the activities containing the costs);
- Update remaining cost appropriately;
- Updated schedule to show actual completion on milestones;
- Narrative to describe progress, planned activities, issues, adjustments to remedy any activities or milestones behind schedule, etc., in the format described in Schedule Submissions;
- Any changes other than those to actual start, actual finish, remaining duration, and Percent Complete are considered revisions. Revisions to a schedule update are subject to acceptance by the Engineer;

As-Built Schedule – A final As-Built Schedule shall be submitted within 15 calendar days following the contract completion. The as-built schedule should reflect the final project including extra work from change orders.

Baseline Schedule Changes – Once the baseline schedule has been accepted, all subsequent schedules provided will be considered schedule updates and compared to the original baseline. A

new baseline will only be considered when significant changes in contract scope, changes in SCDOT priorities, or delays beyond the control of the Contractor occur.

If a baseline change is needed, the Contractor shall provide, in writing, a request to the Resident Construction Engineer with the following information:

- An electronic copy of the proposed baseline schedule using the following naming convention and in accordance with **Schedule Types** (included previously)

Type of Schedule Submitted:	Updated Baseline
File Name Convention:	[Contract ID]ub[Data Date]
File Name Example:	32.82571ub060201

- Narrative identifying changes warranting a new baseline

A decision for an updated baseline will be made jointly between the Resident Engineer and the District Scheduler within 10 business days of receipt of request.

Progress Meetings- The contractor shall present the most current schedule at progress meetings to discuss any issues and upcoming events. If found necessary by the SCDOT, the contractor shall attend meetings to specifically discuss issues about the schedule.

Level 3 Schedule Requirements

Level 3 schedule requirements will be enforced on contracts where the bid amount exceeds \$20 million and one of the following occurs:

- SCDOT financial status warrants the specific control of large project monthly payouts
- The contract SVI is less than -0.50 or greater than 0.50 for two consecutive months indicating the project is significantly behind or ahead of the Contractor’s baseline schedule.

In the event that the Department chooses to enforce the Level 3 Schedule Requirement, the Contractor will submit an updated baseline schedule within 15 days of notification. The Contractor schedule will be used for payment purposes once the baseline schedule has been accepted by the Department. In addition to meeting the requirements of the Level 2 Schedule, the following shall apply.

Once accepted by SCDOT, the project’s initial baseline cost loaded CPM will be used for SCDOT budget purposes and the contractor will not be paid in excess of the cumulative amount shown on the schedule through each payment date; regardless of what subsequent monthly updates indicate. For example, see chart below:

Pay period ending	12/31/11	1/31/12	2/29/12	3/31/12	4/30/12	5/31/12
Baseline CPM Planned Payout in Millions (Cumulative to Date)	2.0 (2.0)	3.0 (5.0)	3.0 (8.0)	4.0 (12.0)	4.0 (16.0)	3.0 (19.0)

Actual work performed (Cumulative to Date)	1.5 (1.5)	2.0 (3.5)	3.5 (7.0)	6.0 (13.0)	3.0 (16.0)	4.0 (20.0)
Payout by SCDOT (Cumulative to Date)	1.5 (1.5)	2.0 (3.5)	3.5 (7.0)	5.0 (12.0)	4.0 (16.0)	3.0 (19.0)

Partial payment estimates will be generated in SiteManager (computerized construction management system) based on actual quantities installed. If actual quantities installed exceed the cumulative schedule amount to date, a negative adjustment will be made in SiteManager to adjust the pay as necessary. For previous work exceeding the schedule amount, payments will be released as work progresses and payouts fall below the scheduled cumulative amount, never to exceed the cumulative scheduled amount through that pay period.

If significant contract changes are necessary, and upon approval by the SCDOT, a re-baseline to the initial CPM will be allowed per the CPM schedule specification and the payout schedule may be adjusted accordingly.

All subcontractors must be paid in accordance with the Prompt Payment Clause (Supplemental Specification dated June 14, 2000) for the quantities used to generate the partial payment estimates. In instances where a payout by SCDOT is less than the actual work installed under a given estimate, the Prompt Payment Clause is hereby amended to require full payment to all subcontractors, for work complete, within 7 days of receipt of said SCDOT payout.

Contract Schedule Performance Evaluation:

Project performance is not measured for contracts where the percent time < 0.30 for projects with a Level I Requirement and percent time < 0.20 for projects with the Level II Requirement or Level III Requirement.

$$\text{Percent Time} = (\text{Last Estimate Date} - \text{NTP}) / [(\text{Adj Completion Date}) - (\text{NTP})]$$

Level I Requirement: Contracts with a minimal schedule requirement that are not deemed “on-call:”

Performance curves were developed using historical data from SiteManager based on contract type and ranges of contract amount. For each of these groupings, three curves identifying minimal performance levels are used to measure project performance. On the example below, the curves indicate that projects falling below the 50th percentile line are slower than 50 percent of the projects of same type and in the range of the bid amount indicated. Projects falling below the 40th percentile line are slower than 60 percent of the projects of the same type and in the range of the bid amount indicated. Projects falling below the 25th percentile line are slower than 75 percent of the projects of the same type and in the range of the bid amount indicated.

On a monthly basis at the end of the estimate period, a comparison of Time Percent Complete vs. Work Percent Complete will be made and plotted on a performance curve matching the contract type within the bid amount. The measurements are defined as:

$$\text{Time Percent Complete} = (\text{Last Estimate Date} - \text{NTP}) / [(\text{Adj Completion Date}) - (\text{NTP})]$$

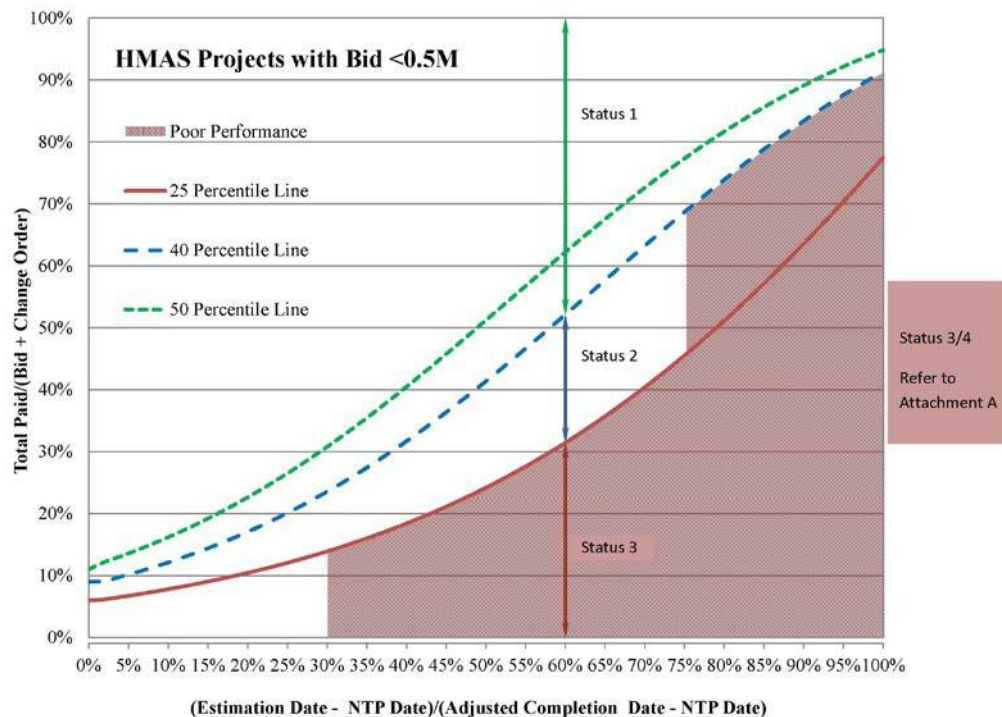
$$\text{Work Percent Complete} = \text{Total Paid} / (\text{Total Bid} + \text{CO})$$

Poor Performance is considered when any contract is beyond its Adjusted Contract Completion date or when Time Percent Complete versus Work Percent Complete plots in the shaded area (on the appropriate performance curve) as defined by:

[30%, 75%) time below the 25th percentile line

-or-

[75%, 100%] time below the 40th percentile line



Example Performance Curve

Performance curves may be found under Construction Schedule Templates on the Extranet at: http://www.scdot.org/doing/constructionLetting_Extranet.aspx

Contracts with a CPM – Level II and III Schedule:

Monthly CPM updates are required for contracts with a CPM Level II or Level III schedule requirement as defined **under Submission, Review and Acceptance Process**. The contractor shall update actual completed quantities and physical percent complete (% of work complete for the activity) for all activities impacted during the most recent estimate period.

Budgeted cost of the work performed (Earned Value) from the schedule update and budgeted cost of work planned (Planned Value) from the accepted baseline schedule are used to determine project variance in Primavera utilizing Schedule Variance Index (SVI). The calculation used by Primavera is:

$$\text{Schedule Variance Index (SVI)} = (\text{Earned Value} - \text{Planned Value}) / \text{Planned Value}$$

Where $\text{SVI} < -0.10$, the contract is considered to be slipping behind plan.

Contract Performance Action:

A summary of progress performance action is included in Attachment A. Preliminary Notice of Delinquency is abbreviated as PND.

Level I Schedules:

When plotting Time Percent Complete vs Work Percent Complete as indicated above, if the contract falls in the shaded section on the appropriate performance curve,

First Offense:

- PND w/o bonding notification
- Request recovery plan

Second Offense:

- PND w/bonding notice
- Request recovery plan
- Hold PND to monitor recovery plan. If plan not met, move to delinquency

Level II or III Schedules:

In any estimate period where the SVI is $(-0.20, -1.0]$ as defined under: **Contracts with a CPM – Level II and III Schedule:**

First Offense:

- PND w/o bonding notification
- Request recovery plan

Second Offense:

- PND w/bonding notice
- Request recovery plan
- Hold PND to monitor recovery plan. If plan not met, move to delinquency

Measurement and Basis of Payment

Level 1 Schedule

There is no separate measurement or payment for look-ahead schedules. All costs associated with the preparation or revision of a look-ahead schedule are considered incidental to the work.

Level 2 and 3 Schedules

The Department will make partial payments according to Section 109, Standard Specifications for Highway Construction, and as modified by the following schedule:

Basis of Payment	Percentage of Contract Unit Price of Item
After the Engineer has accepted the CPM Baseline schedule	60

Type of Schedule	Ahead of Schedule	Status 1 Action	Status 2 Action	Status 3 Action	Status 3 Action	Status 4 Action
Level I Performance Curve	Projects falling above the 50% curve Monitor payouts	No Action	When plotting Time Percent Complete vs Work Percent Complete, if the contract falls in the shaded section of Status 2 or Status 3 on the appropriate performance curve,		If the contract has not reached substantial completion and is beyond contract completion < 45 days	If has not reached substantial completion and contract is beyond the contract completion > 45 days,
			<p><u>First Offense:</u> -PND w/o bonding notification -Request recovery</p> <p><u>Second Offense:</u> -PND w/bonding notice -Request recovery plan -Hold PND to monitor recover plan. If plan not met, move to delinquency.</p>	<p>Preliminary Notice of Default w/bonding notice</p> <p>- Request plan to complete -Hold preliminary notice to monitor plan to complete. If plan not met, move to Default.</p>	<p>Notice of Default according to the Standard Specifications</p> <p>-Request plan to complete</p>	
Level II or III CPM	SVI > 0.10 Monitor payouts	SVI > -0.10 No Action	SVI (-0.10, -0.25]	SVI (-0.25, -1.0]	If the contract is beyond contract completion < 45 days	If contract is beyond the contract completion > 45 days,
			Where SVI (-0.20, -1.0]		<p>Preliminary Notice of Default w/bonding notice</p> <p>- Request plan to complete -Hold preliminary notice to monitor plan to complete. If plan not met, move to Default.</p>	<p>Notice of Default according to the Standard Specifications</p> <p>- Request plan to complete</p>
		Notes: [indicates inclusive of value (indicates exclusive of value				

Attachment A – Summary of Progress Performance Action

November 10, 1999

CONSTRUCTION ESTIMATES

Monthly Construction Estimates:

For monthly or progress estimates, the Contractor will be provided a Summary to Contractor report that shows the active items and quantities of work. As a requirement of this contract, the Contractor shall maintain sufficient records of work performed in order to verify the quantities reported in the estimate. The Contractor will verify the reported quantities by signing the Summary to Contractor report to the Engineer.

Final Construction Estimate:

For the Final Construction Estimate, the County will provide the Contractor the Summary to Contractor and the Item Quantity reports. The Item Quantity reports varies from the Summary to Contractor report, in that it shows every item included in the contract with original quantities and any change order quantities, quantities installed, quantities paid to date, and the final quantity.

Measurement and Payment:

There shall be no separate measurement and payment for the above work. The costs for this work are considered incidental to the overall work on this contract and shall be included in the bids for other items of work.

ASPHALT BINDER ADJUSTMENT INDEX

General: The Bidder is advised that the Department will apply Asphalt Binder Adjustments for specified items of work when the Index for Asphalt Binder (PG64-22) varies more than 5% from the Base Index price established for the contract.

Index: : The Department maintains an Index for Asphalt Binder, which is an average of quotations from current asphalt binder suppliers, effective on the 1st of each month. The resulting Index is posted in spreadsheet form on the Department's Internet at <http://www.scdot.org/doing/monthlyindexes.asp>.

Base Index: The Department sets a Base Index date for each contract subject to Asphalt Binder adjustments with the date set prior to the highway letting. The Index for Asphalt Binder on that Base Index date sets the framework of the 5% adjustment increments to be used for the contract. Tables showing the adjustment increments are displayed in the above noted spreadsheet (AC Binder Chart tab).

Asphalt Binder content Factors: The Department sets a Base Index date for each contract subject to Asphalt Binder adjustments with the date set prior to the highway letting. The Index for Asphalt Binder on that Base Index date sets the framework of the 5% adjustment increments to be used for the contract. Tables showing the adjustment increments are displayed in the above noted spreadsheet (AC Binder Chart tab).

Items of Work Eligible for A.C. Binder Adjustments	Unit	AC Binder Tons
Liquid Asphalt Binder (PG64-22)	TON	1.0000
Liquid Asphalt Binder (PG76-22)	TON	1.0000
Full Depth Patching – 4” (AC Binder)	SY	0.0110
Full Depth Patching – 6” (AC Binder)	SY	0.0165
Full Depth Patching – 8” (AC Binder)	SY	0.0220
Full Depth Patching – 10” (AC Binder)	SY	0.0275
Full Depth Patching – 12” (AC Binder)	SY	0.0330
Single Treatment Type-1 (0.38 gal/sy AC)	SY	0.0016
Single Treatment Type-2 (0.38 gal/sy emulsion)	SY	0.0011
Single Treatment Type-3 (0.25 gal/sy emulsion)	SY	0.0007
Single Treatment Class-A (0.30 gal/sy emulsion)	SY	0.0008
Double Treatment Type-1 (0.82 gal/sy emulsion)	SY	0.0023
Double Treatment Type-2 (0.97 gal/sy emulsion)	SY	0.0027
Double Treatment Type-2 (0.55 gal/sy emulsion)	SY	0.0015
Double Treatment-Class A Special (0.66 gal/sy (emulsion)	SY	0.0018
Triple Treatment-Type 1 (0.85 gal/sy emulsion)	SY	0.0024
Triple Treatment-Type 2 (0.71 gal/sy emulsion)	SY	0.0020
Triple Treatment-Type 4 (0.82 gal/sy emulsion)	SY	0.0023
Asph Surf Trmt – Single Treatment (0.28 gal/sy mod. Emulsion)	SY	0.0008

Asph Surf Trmt – Double Treatment (0.48 gal/sy mod. Emulsion)	SY	0.0013
Microsurfacing, Type II	SY	0.0007
Microsurfacing, Type II – Leveling	TON	0.0800
Emulsion for High Performance Chip Seal (Macrosurfacing)	Gal	0.0028

Per unit index adjustments are determined by multiplying the Asphalt Binder Content factor by the Asphalt Binder Index Change (minimum of incremented range). The resulting per unit amount is then applied to the construction estimate as a line item adjustment.

Additional Provisions:

- A. The Department will calculate and apply Asphalt Binder Index Adjustments to estimates based on Index values set at the beginning of the estimate period. Estimate period begins on the 1st of the month and ends on the last day of the month. The 1st of the month Index will be compared to the contract Base Index to determine Index adjustments for the estimate period.
- B. In the event the work (on a contract item subject to asphalt binder adjustment) continues after expiration of the contract completion date, the asphalt binder index in effect on the contract completion date will become the ceiling (or maximum) of indexes to be applied for the work. Lower indexes will be applied, while higher indexes will be limited to the ceiling noted.
- C. This provision shall apply to supplemental agreements, overruns and extensions to this project for the specified item(s) to be adjusted.
- D. The Base Index, Current Index and Adjustments may be referenced directly on the Department’s Index spreadsheet at <http://www.scdot.org/doing/monthlyindexes.asp>.

April 8, 2009

FINE GRADING

Fine Grading is the work necessary to bring the subgrade material into the final shape and compacted condition prescribed in the Contract documents. The area considered for Fine Grading is defined in **Section 208** of the 2007 SCDOT Standard Specifications.

To clarify the area for the item Fine Grading, modify the following subsections in **Section 208** as indicated below.

Subsection 208.4.3 Fine Grading

Delete the third paragraph and replace it with the following:

- 3 Fine Grading is defined as the work necessary to bring the subgrade material into the final shape and compacted condition prescribed in the Contract documents. The subgrade surface area paid for as Fine Grading is only the area under the mainline pavement structure plus 18 inch beyond the longitudinal edge of the mainline pavement structure. Except for the additional 18 inches beyond the mainline pavement structure, the area under existing pavement that remains in place, unpaved shoulders, driveways, curbs, gutters, sidewalks, temporary pavement, and slopes is not included in the Fine Grading area.

Subsection 208.5 Measurement

Delete the first and second paragraphs and replace them with the following:

- 1 The quantity for the pay item Fine Grading is the surface area of the subgrade that is constructed and prepared for the intended pavement structure as defined in paragraph 3 of **Subsection 208.4.3** and is measured by the square yard (SY), complete, and accepted. The bid quantity will be considered the full amount to be paid unless work requiring fine grading is deleted, or additional work is added to the project that was not required by the original bid documents.
- 2 If the pay item Fine Grading is not included in the Contract, subgrading work is not measured for payment directly and is considered included in contract unit bid price of the various other items of work. When Fine Grading is included in the Contract, the subgrading work for areas under existing pavement that remains in place, unpaved shoulders, driveways, curbs, gutters, sidewalks, temporary pavement, and slopes is not measured for payment directly and is considered included in contract unit bid price of the various other items of work.

ASPHALT BINDER AND ADDITIVES

Delete Subsection 401.2.1.1, Binder and Additives, General of the Standard Specification in its entirety and replace it with the following:

401.2.1.1 Performance Graded (PG) Binder

Use PG 64-22 or PG 76-22 binder as required by the contract that conforms to all of the requirements of AASHTO M 320. Do not use any combination of “air blown” asphalt binders. Ensure that the asphalt binder supplier lists all types of modifiers and additives used in the production of their PG binders including source of Re-Refined Engine Oil Bottoms (REOB), polymers, ground tire rubber (GTR), polyphosphoric acid (PPA), silicone, and liquid anti-stripping agent (LASA) in their Quality Control Plans. Ensure that additives used for compaction aides or anti-strips such as silicones, WMA additives, and LASA products are listed on the Bill of Lading (BOL). Use PG asphalt binders and modifiers that are heat and storage stable. Thoroughly blend the composite materials at the asphalt terminal before being loaded into the transport vehicle. Asphalt terminals that either supply or produce PG binders must be able to store multiple tanker loads of PG and certify that their products meet AASHTO M 320 prior to transferring or shipping on the BOL and that all modifiers and additives are compatible. Ensure that all PG binders adhere to SCDOT Qualified Products Policy No. 37-38. Only use PG 64-22 and PG 76-22 binder from sources listed on the most recent edition of SCDOT Qualified Product List 37.

401.2.1.1.1 Modified Performance Graded Binder

When specified, use modified binder consisting of a neat binder modified with a polymer or other modifier producing a binder complying with the requirements of a PG 76-22 as specified in AASHTO M 320 with the addition of the Multiple Stress Creep Recovery (MSCR) test using AASHTO T 350. Ensure acceptable elastomeric polymer is used by using Non-recoverable Creep Compliance values plotted against Percent Recovery based on figure 1 found in AASHTO R92 using RTFO aged material. Ensure that the MSCR test is performed at 64°C using the Very Heavy Traffic “V” Grade requirement in AASHTO M 332. Use elastomer polymer or modifier consisting of a styrene-butadiene (SB), styrene-butadiene-styrene (SBS), styrenebutadiene-rubber (SBR), or ground tire rubber (GTR). Polyphosphoric Acid (PPA) may also be added to the binder, but must not exceed 0.5% by weight of the asphalt binder. Varying blends of SB, SBS, SBR, GTR (7% min.), and PPA (0.5% max.) may be used, at the discretion of the AME, provided the end product meets all specified requirements for the PG 76-22. Perform the storage stability separation test ASTM D7173 to ensure the asphalt binder is homogenous. Ensure that all storage tanks on the asphalt plant site are clearly marked to prevent cross contamination of different PG binders.

401.2.1.1.1.1 Ground Tire Rubber (GTR) in Performance Graded Binder

Ensure that the Ground Tire Rubber (GTR) is terminally (no exceptions) blended with the neat asphalt to create a homogenous and storage stable PG 76-22 that meets all criteria as stated in 401.2.1.1.1, with the exception of Solubility requirement (AASHTO T 44). Blending the GTR

modified binder at the asphalt plant during asphalt mixture production will not be permitted. Use a 2.0mm gap setting when using the DSR in accordance to AASHTO T 315 and AASHTO T 350. GTR materials must be free from excessive moisture when received from the tire recycling facility and stored in a dry location at the terminal to prevent blending issues with the binder modification process. A letter of compliance from the tire recycling facility will be required by the AME and the asphalt terminal stating that the GTR blend will meet this specification. The GTR must be free of loose metal particles, other foreign contaminating materials, with exception of embedded metal particles in the rubber. Mineral powder may be added to reduce sticking and caking of the GTR particles. Stabilizing or compatibility additive(s) can be used to achieve better particle distribution. Any additives used for this purpose must not be detrimental to the performance of the asphalt binder or mixture performance and must be accepted by the AME in the supplier's QC plan. Ensure that the GTR supplier provides certificates of compliance with each shipment certifying that all requirements of this specification are complied with for each production lot number and the end product is homogenous and shows no signs of separation or coagulation. In the event that the terminal changes supply sources of GTR type of grind (ambient or cryogenic), or particle size, the asphalt terminal must perform a complete binder analysis on their revised product, and also provide a split sample to the SCDOT to ensure specification compliance.

Provide all sources of GTR and grind type in the asphalt terminal's QC plan. SCDOT may obtain samples of the GTR particles, base binder, or the finished GTR modified asphalt binder to ensure specification compliance at any time.

Physical Test	Test Procedure	Specification
Sampling of the GTR	ASTM E105 ASTM E122	In accordance to random sampling procedures
GTR Supply	ASTM D5603	Ambient or Cryogenic Grind
Dosage of GTR	Per COA & Supplier's QC Plan	Minimum of 7.0% by weight of the PG 64-22 base asphalt binder
GTR Specific Gravity	ASTM D5603	1.06 – 1.20
GTR Particle Distribution	ASTM D5644	30 Mesh Maximum of 2.0% Retained
GTR Metal Content	ASTM D5603	Maximum 0.01%
GTR Fiber Content	ASTM D5603	Maximum 0.50%
GTR Moisture Content	ASTM D1509	Maximum 0.75%
Mineral Filler –Talcum Powder (Optional)	ASTM M17	Maximum of 4.0%
Stabilizing Additives (Optional)	-	Maximum of 4.5% by wt. of GTR

Chemical Test	Test Procedure	Specification
Acetone Extract	ASTM D297	Maximum 25.0%
Rubber Hydrocarbon Content		40.0 – 60.0 %
Ash Content		Maximum 8.0 %
Carbon Black Content		20.0 – 40.0 %
Natural Rubber		16.0 – 45.0 %

401.2.1.1.1.2 Ground Tire Rubber in Open Graded Friction Course or SMA Mixtures

Stabilizing fibers and fiber supply systems at the asphalt plant may not be necessary when the GTR binder is used as required by section 409.2.3 and 409.4.3 of the Standard Specifications or

any other Supplemental Specification for OGFC or SMA. Perform the SC-T-90 drain-down procedure at 350°F when conducting the asphalt mix design, or otherwise directed by the AME. In the event that drain-down values are found to be excessive, then stabilizing fibers may be necessary as directed by the AME. No additional compensation will be paid for the fibers in the OGFC or SMA mixture.

401.2.1.1.1.3 Asphalt Plant Storage Requirements When Using Ground Tire Rubber

Use a dedicated storage tank for “terminal blended GTR asphalt binder” at the asphalt plant. This tank must be capable of providing continuous mixing, as well as recirculation of the GTR asphalt binder as needed. Ensure that this tank is heated and capable of maintaining the temperature of the homogeneous blend of asphalt binder and GTR at 300°F to 350°F. Ensure that GTR modified binders are not mixed with other modified PG 76-22 binder without permission of the AME.

REMOVAL OF EXISTING ASPHALT PAVEMENT BEFORE PATCHING

Delete Subsection 401.4.14 Removal of Existing Asphalt Pavement before Patching, of the Standard Specifications in its entirety and replace with the following:

The **RCE** will determine the limits of distressed pavement and will mark width and length of patches. **RCE / RME** will inspect the road and ensures that drainage is adequate and no additional work needs to be done to the ditches and shoulders to promote proper drainage. The **RCE** may elect to obtain random cores if needed to determine proper depth of distressed area to be patched. Construct patches with a minimum size of 6.5 feet x 6.5 feet with at least 25 feet between patches. Care should be taken to ensure that longitudinal joints do not end up in the wheel paths. In the event that considerable quantities of full depth patching (FDP) are encountered, the RCE will consult with the State Pavement Design Engineer to consider other rehabilitation methods.

Remove the pavement to the depth indicated in the Plans, ensuring that the face of the cut is straight and vertical, with the exception of tapers needed to get equipment in and out of the patched area. If unstable material is encountered, remove additional material as directed by the **RCE**. Backfill the volume of the material removed below the patch with material meeting the requirements of **Section 305**, Graded Aggregate Base, and thoroughly compact in layers not exceeding 4 inches with a vibratory compactor. Thoroughly tack the sides of the existing pavement before placing the asphalt patch material in the hole.

Place the patch material in relatively uniform layers not to exceed the number of lifts in the table below. Ensure that the patch material is selected from the table below. Compact each layer with a vibratory compactor and a pneumatic roller. Whenever practical, allow lifts to cool down prior to placing the next lift, especially when doing multiple patches in the same area. The 175° F requirement between lifts does not apply to FDP. Conduct the work so that patches are opened and filled each day, with the roadway being opened to traffic by the end of each days operation.. Ensure that the finished patch is smooth riding by using a straight edge. Temperature and calendar restrictions found in **Section 401.4.4** do not apply, however no FDP will be permitted if the area is wet or frozen prior to removing the old pavement.

Full Depth Patching Materials		
Depth of FDP	Select mixture type below based on Depth of FDP	
	Alternate Mixture Options	Typical Mixture
4" or Less	Surface Type B / C 2 Lifts	Intermediate C 2 Lifts
6"	Surface Type B / C 2 Lifts	Intermediate C 2 Lifts
8"	Intermediate B Special 2 lifts	Intermediate C 3 lifts
10"	Intermediate B Special 2 lifts	Intermediate C 3 lifts
12" or More	Consult with the State Pavement Design Engineer	

July 1, 2010

TRANSPORTATION AND DELIVERY OF MIXES

Subsection 401.4.17, Transportation and Delivery of Mixes, of the Standard Specification will be deleted in its entirety and replaced with the following:

Transport the HMA from the plant to the point of use in vehicles meeting the requirements of Subsection 401.3.7. Do not permit any load of HMA to leave the plant so late in the day that it cannot be spread, finished, and compacted during daylight of that same day unless an approved artificial lighting system is provided. Ensure that HMA mixtures containing the asphalt binder grades below are produced and delivered to the jobsite within the acceptance range listed in the table below with exception that Base C and D mixtures will be produced and delivered at a temperature range of 240°-275° F. The mix temperatures will be checked using SC-T-84. Ensure the HMA mixtures are held within the acceptance range based on Binder Performance Grade in the Job Mix Formula. Deliver mixture within the acceptance range for temperature to assist in obtaining density requirements which provide smooth riding pavements with uniform texture.

Binder Performance Grade	Acceptance Range (°F)
PG 64-22	265°-325°
PG 70-22	285°-335°
PG 76-22	300°-350°

Note: This temperature specification does not apply to WMA (SC-M-408). Refer to the HMA Contractor's QC Plan for mix acceptance range based on selected asphalt plant WMA technologies

September 1, 2015

TRAFFIC CONTROL

Delete Subsection 601.1.3 of the Standard Specifications in their entirety and replace them with the following:

601.1.3 Restrictions

- The Department prohibits lane closures on interstate highways during holiday weekends, extended holiday periods or special events as defined below unless otherwise directed by the Engineer.** The Department's holiday lane closure restrictions for holidays that are observed on a Monday will include the weekend and are considered a holiday weekend unless otherwise established by these specifications. The Department defines the typical Monday holiday weekend as from 6:00 am of the Friday before the weekend until 6:00 a.m. of the Tuesday after the holiday. Lane closures, road closures, shoulder closures, pacing operations or any operations that will impact the efficient flow of traffic or hinder normal traffic operations during these Monday holiday weekends as defined above are prohibited unless otherwise directed by the Engineer.
- Easter and Thanksgiving holidays are varied and extended holiday periods of a holiday weekend. Easter holidays are defined as from 12:00 noon of the Thursday before Easter until 6:00 p.m. of the Monday after Easter. Thanksgiving holidays are defined as from 12:00 noon of the Wednesday before Thanksgiving Day until 6:00 a.m. of the Monday after Thanksgiving Day. Lane closures, road closures, shoulder closures, pacing operations or any operations that will impact the efficient flow of traffic or hinder normal traffic operations during the Easter and Thanksgiving holidays as defined above are prohibited unless otherwise directed by the Engineer.
- The 4th of July holiday is considered an extended holiday period. Considering the progressive nature of the calendar, this extended holiday period will vary from year to year depending upon the day of the week the holiday occurs. See the table below. Lane closures, road closures, shoulder closures, pacing operations or any operations that will impact the efficient flow of traffic or hinder normal traffic operations during the 4th of July holiday as defined below are prohibited unless otherwise directed by the Engineer.

4th of JULY HOLIDAY	
DAY OF WEEK	DURATION
MONDAY	6:00 AM FRIDAY, JULY 1 ST through 10:00 PM SUNDAY JULY 10 TH
TUESDAY	6:00 AM FRIDAY, JUNE 30 TH through 10:00 PM SUNDAY JULY 9 TH
WEDNESDAY	6:00 AM FRIDAY, JUNE 29 TH through 10:00 PM SUNDAY JULY 8 TH

THURSDAY	6:00 AM FRIDAY, JUNE 28 TH through 10:00 PM SUNDAY JULY 7 TH
FRIDAY	6:00 AM FRIDAY, JUNE 27 TH through 10:00 PM SUNDAY JULY 13 TH
SATURDAY	6:00 AM FRIDAY, JUNE 26 TH through 10:00 PM SUNDAY JULY 12 TH
SUNDAY	6:00 AM FRIDAY, JUNE 25 TH through 10:00 PM SUNDAY JULY 11 TH

4 The Christmas holidays are considered an extended holiday period. Considering the progressive nature of the calendar, this extended holiday period will vary from year to year depending upon the day of the week the holiday occurs. See the table below. Lane closures, road closures, shoulder closures, pacing operations or any operations that will impact the efficient flow of traffic or hinder normal traffic operations during the Christmas holidays as defined below are prohibited unless otherwise directed by the Engineer.

CHRISTMAS HOLIDAYS	
DAY OF WEEK	DURATION
MONDAY	6:00 AM FRIDAY, DECEMBER 22 ND through 10:00 PM WEDNESDAY JANUARY 3 RD
TUESDAY	6:00 AM FRIDAY, DECEMBER 21 ST through 10:00 PM THURSDAY JANUARY 3 RD
WEDNESDAY	6:00 AM FRIDAY, DECEMBER 20 TH through 10:00 PM FRIDAY JANUARY 3 RD
THURSDAY	6:00 AM TUESDAY, DECEMBER 23 RD through 10:00 PM SUNDAY JANUARY 4 TH
FRIDAY	6:00 AM WEDNESDAY, DECEMBER 23 RD through 10:00 PM SUNDAY JANUARY 3 RD
SATURDAY	6:00 AM THURSDAY, DECEMBER 23 RD through 10:00 PM MONDAY JANUARY 3 RD
SUNDAY	6:00 AM FRIDAY, DECEMBER 23 RD through 10:00 PM TUESDAY JANUARY 3 RD

5 Special events are events generating excessive traffic as determined by the Department.

Lane closures, road closures, shoulder closures, pacing operations or any operation that would impact the efficient flow of traffic or hinder normal traffic operations during special events are prohibited unless otherwise directed by the Engineer.

ADHESIVELY BONDED ANCHORS AND DOWELS

1.0 Adhesively Bonded Anchors and Dowels

1.1 Scope

Furnish all required labor, equipment, and materials and perform all operations necessary for installing anchors and dowels in concrete using an adhesive bonding system in accordance with the details shown on the Plans and with the requirements of this Specification. Provide a material system specifically intended for use in structural applications for bonding anchors and dowels to hardened concrete. Limit applications to anchors and dowels installed in horizontal, vertical, and downwardly inclined positions. Do not use adhesive anchors in overhead or upwardly inclined installations. See Figure 1.1.

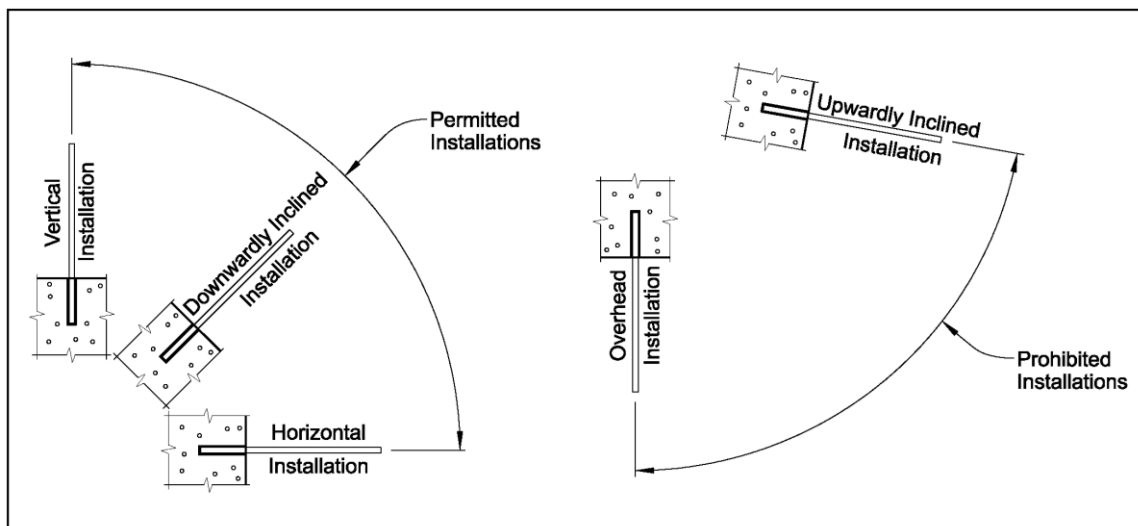


Figure 1.1

Submit a description of the proposed adhesive bonding system to the RCE for review, comments, and acceptance. Include in the description the anchor type, equipment, Manufacturer's recommended hole diameter, material specifications, and any other material, equipment or procedure not covered by the contract documents. List the properties of the adhesive, including density, minimum and maximum temperature application, setting time, shelf life, pot life, shear strength, bond strength, and compressive strength. If anchors or dowels containing a corrosion protective coating are required, provide an adhesive that does not contain any chemical elements that are detrimental to the coating and include a statement to this effect in the submittal concerning the contents as required by State or Federal Laws and Regulations.

Submit to the RCE Manufacturer's certification that the adhesive bonding system, when tested for tension pull-out according to ASTM E 488 utilizing identical anchorages, embedment depths, and concrete strengths as those specified on the Plans, does not fail by any mode listed in Section 12 of ASTM E 488 when loaded to the lesser of 85 percent of the specified bond strength (based on the nominal anchorage diameter and embedment depth) or 90 percent of the yield strength of the anchor. Also, submit to the RCE long term load (creep) test results performed in accordance with ASTM E 1512, ICC-ES AC 58, or ICC-ES AC 308. When specified on the Plans, field testing will also be required for adhesive anchorages.

1.2 Materials

Provide adhesive bonding material systems for structural applications that meet the requirements of ASTM C 881, Type IV, Grade 3, Class B or C (depending on site conditions). Do not use "Fast Set epoxy." Package components of the adhesive in containers of such size that one whole container of each component is used in mixing one batch of adhesive. Use containers of such design that all of the contents may be readily removed, and are well sealed to prevent leakage. Do not use material from containers which are damaged or have been previously opened. Use only full packages of components. Furnish adhesive material that requires hand mixing in two separate containers designated as Component A and Component B or in a self contained cartridge or capsule that consists of two components which will be automatically mixed as they are dispensed, as in the case of a cartridge, or drilled into, as in the case of a capsule.

Provide packages clearly marked by the Manufacturer with the following information:

- Manufacturer's name and address
- Product Name
- Date of Manufacture
- Expiration Date
- LOT Identification Number
- Storage and Handling Requirements

With each package include the Manufacturer's instructions for anchor and dowel installation. Include the following information with the instructions:

- Diameters of drilled holes for applicable anchor and dowel sizes.
- Cleaning procedure for drilled holes, including a description of permitted and prohibited equipment and techniques.
- Allowable temperature ranges for storage, installation and curing.
- Identification of acceptable mixing/dispensing nozzles.
- Fabrication requirements for anchors and dowels.
- Description of tools permitted or required for installation.
- Method of identifying properly proportioned and mixed adhesive materials.
- Time and temperature schedule for initial set ('gel time') and full-strength cure.
- Requirements for special installation conditions such as horizontal or near horizontal orientation of the anchor or dowel.

1.3 Construction Requirements

1.3.1 Storage

Deliver the adhesive bonding material system to the job-site in original unopened containers with the Manufacturer's label identifying the product. Store materials delivered to the job-site in the original unopened containers within an appropriate facility capable of maintaining storage conditions consistent with the Manufacturer's recommendations.

1.3.2 Installation

Install the adhesive anchors and dowels perpendicular to the plane surface of the structural member, in accordance with Manufacturer's recommendations, and when the concrete is above 40 degrees Fahrenheit and has reached its 28 day strength. Install the anchorages before the adhesive's initial set ('gel time').

1.3.2.1 Drilling of Holes into Concrete

Ensure that concrete members receiving adhesive-bonded anchors or dowels are structurally sound and free of cracks in the vicinity of the anchor or dowel to be installed. When directed by the RCE, use a jig or fixture to ensure the holes are positioned and aligned correctly during the drilling process.

Use a metal detector specifically designed for locating steel in concrete to avoid conflicts with existing steel reinforcement whenever placement tolerances and edge clearances permit. Unless other equipment is recommended by the Manufacturer, drill holes to the diameter required by the Manufacturer using a rotary hammer drill and bit. Perform core drilling to clear existing steel reinforcement only when approved by the RCE. Dry the drilled holes completely prior to cleaning and installing the anchors or dowels. Clean and prepare drilled holes in accordance with the Manufacturer's recommendations, but as a minimum, use oil-free compressed air to remove loose particles from drilling, brush inside surface to free loose particles trapped in pores, then use compressed air again to remove the remaining loose particles. Use a non-metallic bristle brush and avoid over-brushing to prevent polishing the inside surface of the drilled hole. Check each hole with a depth gauge to ensure proper embedment depth. Repair spalled or otherwise damaged concrete using methods approved by the RCE.

1.3.2.2 Inspection of Holes

Inspect each hole immediately prior to placing the adhesive and the anchors/dowels. Ensure all holes are dry and free of dust, dirt, oil, and grease.

1.3.2.3 Mixing of Adhesive

Mix the adhesive in strict conformance with the Manufacturer's instructions.

1.3.2.4 Embedment of Anchors and Dowels

Remove all debris, oils, and any other deleterious material from the anchors and dowels to avoid contamination of the adhesive bonding material. Insert the anchor or dowel the

specified depth into the hole and slightly agitate it to ensure wetting and complete encapsulation. After insertion of the anchor or dowel, strike off any excessive adhesive flush with the concrete face. Should the adhesive fail to fill the hole, add additional adhesive to the hole to allow a flush strike-off. Do not disturb the anchors and dowels while adhesive is hardening. For horizontal and inclined installations, provide temporary supports to maintain the alignment of the anchors or dowels until the adhesive bonding material has cured.

1.3.3 Field Testing

When specified on the Plans, field test the installed anchors and dowels. Perform field testing of the installed anchors and dowels in accordance with the applicable sections of ASTM E 488. Inform the RCE and the Manufacturer when the tests will be performed at least 2 days prior to testing. For testing, use a calibrated hydraulic centerhole jack system that will not damage the anchor or dowel. Place the jack on a plate washer that has a hole at least 1/4" larger than the hole drilled into the concrete. Position the plate washer on center to allow an unobstructed pull. Position the anchors/dowels and the jack on the same axis. Have an approved testing agency calibrate the jack within 6 months prior to testing. Supply the RCE with a certificate of calibration.

Divide the anchors and dowels into LOTs for field testing and acceptance. A LOT consists of anchors or dowels of the same type, diameter, strength, embedment length, and adhesive bonding system. Prior to performing field tests, submit proposed testing locations to the RCE for review, comments, and acceptance. In the presence of the RCE, field test the anchors or dowels for each LOT in accordance with the following:

Test a minimum of 1 anchorage but not less than 10% of all anchors in the LOT to the test load shown on the Plans.

If less than 60 anchorages are to be installed: Install and test the minimum required number of anchorages prior to installing the remaining anchorages. After installing the remaining anchorages, test a minimum of 2 of these anchorages at random locations selected by the RCE.

If more than 60 anchorages are to be installed: Test the first 6 anchorages prior to installing the remaining anchorages. Then test, at random locations selected by the RCE, 10% of the number in excess of 60 anchorages.

For every failed field test, perform two additional field tests on adjacent untested anchors or dowels within the LOT. Continue additional field tests until no more test failures occur, or until all anchors and dowels within the LOT are tested.

Begin testing after the Manufacturer's recommended cure time has been reached. For testing, apply and hold the test load for three minutes. If the jack experiences any drop in gage reading, restart the test. For the anchorage to be deemed satisfactory, hold the test load for three minutes with no movement or drop in gage reading.

Remove all anchors and dowels that fail the field test, without damage to the surrounding concrete. Re-drill holes to remove adhesive bonding material residue and clean the hole in accordance with Subsection 1.3.2.1. For reinstalling replacement anchors or dowels,

follow the same procedures as new installations. Do not reuse failed anchors or dowels unless approved by the RCE.

Determine failure of the field test in accordance with ASTM E 488. Submit certified test reports to the RCE. Final acceptance of the adhesively anchored system is based on the conformance of the pull test to the requirements of this Specification. Failure to meet the criteria of this Specification is grounds for rejection.

1.4 Measurement

No separate measurement for payment will be made for furnishing, installing, and testing of adhesively bonded anchors and dowels.

1.5 Payment

Include all costs of adhesively bonded anchors and dowels in the contract unit price bid for the items to be anchored.

**TRAILER MOUNTED
AUTOMATED FLAGGER ASSISTANCE DEVICE SYSTEM
(AFAD)**

1. Description:

This specification details the minimum requirements of all Automated Flagger Assistance Device Systems (AFAD) utilized and placed into operation on the roadways of the state of South Carolina.

An automated flagger assistance device system is a temporary traffic control device system for controlling the flow of traffic through temporary traffic control areas, typically work zones, that generate the requirement for two-way traffic to share a single travel lane. An automated flagger assistance device system shall consist of no less than 2 individual AFAD units linked and remotely controlled by wireless communications. A flagger(s), who has successfully completed a flagger training course sponsored by a South Carolina Department of Transportation approved work zone traffic control training provider, shall operate the system. Install, operate and maintain each AFAD unit as designated by these Supplemental Specifications, the manufacturer's specifications, the Standard Drawings for Road Construction, the Plans and the Engineer.

An automated flagger assistance device system acceptable for use on the roadways of the state of South Carolina shall be either a Type I "RED / YELLOW" Lens system or a Type II "STOP / SLOW" Sign system.

The automated flagger assistance device system shall comply with all requirements for Automated Flagger Assistance Devices as specified and directed by the MUTCD, latest edition, and this supplemental specification. An automated flagger assistance device system shall operate and comply with all requirements for flagging operations as specified and directed by the latest editions of the MUTCD, the South Carolina Flagger's Handbook and the Standard Specifications for Highway Construction. Also, an automated flagger assistance device system shall operate and comply with all requirements for flagging operations as specified and directed by the Standard Drawings for Road Construction, the special provisions, the plans and the Engineer.

2. Operations Requirements:

A. General: Automated flagger assistance device systems are only permitted for use on two-lane two-way roadways where each single travel lane of opposing traffic is required to utilize and share one travel lane. An AFAD system is PROHIBITED for use on multilane roadways with reduced numbers of travel lanes. An AFAD is not a traffic control signal and shall not be used as a temporary traffic control signal or to control traffic at any location with more than 2 opposing single travel lanes seeking to share one travel lane.

B. Documentation: Provide documentation to the SCDOT to verify that each operator of an automated flagger assistance device system has successfully completed instruction in the operation of a system by the manufacturer of that system. Also, provide documentation to verify

that each operator has successfully completed a flagger training course sponsored by a South Carolina Department of Transportation approved work zone traffic control training provider.

1. **Work Conducted under Contract to SCDOT** - Provide documentation of proof of successful completion of training in the proper operation of the AFAD system by the manufacturer of the system and successful completion of training as a flagger by a South Carolina Department of Transportation approved work zone traffic control training provider to the Resident Engineer no less than 7 days prior to placing an automated flagger assistance device into operation.
2. **Work Conducted under Encroachment Permit** - Provide documentation of proof of successful completion of training in the proper operation of the AFAD system by the manufacturer of the system and successful completion of training as a flagger by a South Carolina Department of Transportation approved work zone traffic control training provider along with submittal of the encroachment permit to the SCDOT.

C. Operator: The operator of the an automated flagger assistance device system shall be a recipient of and have successfully completed instruction in the operation of the system by the manufacturer of that system. The operator shall have successfully completed a flagger training course sponsored by a South Carolina Department of Transportation approved work zone traffic control training provider.

The South Carolina Department of Transportation only recognizes the following entities as acceptable providers of work zone traffic control training for organizations outside of the SCDOT who perform work activities within the highway rights-of-way in South Carolina under either contract to SCDOT or encroachment permit:

American Traffic Safety Services Association (ATSSA)
Institute for Transportation Research and Education at North Carolina State University (ITRE)
Carolinas Association of General Contractors (AGC)
National Safety Council South Carolina Chapter

The operator shall control the automated flagger assistance device system from a location with an unobstructed view of the AFAD unit as well as an unobstructed view of the approaching traffic. If a single operator is controlling more than one unit, the operator shall have an unobstructed view of traffic from both directions. At no time is the operator permitted to leave the AFAD unattended when the AFAD is operating.

D. Site Location: When sufficient shoulder space is available, place and position the AFAD unit on the shoulder of the roadway no closer than 1 foot from either the near edge line or the near edge of pavement when an edge line is absent to the near edge of the trailer when the gate arm is in the upright position. When sufficient shoulder space to attain the minimum 1 foot requirement is unavailable, minimal encroachment of the unit upon the adjacent travel lane is permitted.

Place and position the AFAD unit to allow the end of the gate arm, when in the down position, to reach the center of the adjacent travel lane being controlled by the unit. Encroachment by the gate arm when in the down position to a point less than to the center of the

adjacent travel lane or into the opposing travel lane beyond the center of the roadway is PROHIBITED.

Install the advance warning signs required for typical flagging operations on each approach. In addition to the typical flagging operations sign array, also include and install a “Be Prepared To Stop” sign (W3-4-48) between the “Flagger” symbol sign (W20-7-48) and the AFAD unit on each approach. Therefore, the required advance warning signs for each approach are, “Be Prepared To Stop” (W3-4-48), “Flagger” symbol (W20-7-48), “One Lane Road Ahead” (W20-4-48-A) and “Road Work Ahead” (W20-1-48-A).

E. Nighttime AFAD Flagging Operations: During nighttime operations, illuminate each AFAD unit station with any combination of portable lights, standard electric lights, existing street lights, etc., that will provide a minimum illumination level of 108 Lx or 10 fc.

During nighttime operations, operators shall wear a safety vest and safety pants that comply with the requirements of ANSI / ISEA 107 standard performance for Class 3 risk exposure, latest revision, and a fluorescent hard hat. The safety vest and the safety pants shall be retroreflectorized and the color of the background material of the safety vest and safety pants shall be fluorescent orange-red or fluorescent yellow-green.

Supplement the array of advance warning signs with a changeable message sign for each approach during nighttime AFAD flagging operations. These changeable message signs are not required during daytime operations. Install the changeable message signs 500’ in advance of the advance warning sign arrays. Messages should be “Flagger Ahead” and “Prepare To Stop”.

3. System Requirements:

A. General: An automated flagger assistance device system shall consist of a Main AFAD unit and a Remote AFAD unit, linked and remotely controlled by wireless communications. The individual trailer-mounted units shall have nesting capabilities to permit towing of both units in a single trailer configuration. When nested, all lights including stop, tail and turn signal lights of both units shall operate uniformly.

B. Power Source: The electrical power for operation of the sign shall be supplied by a 12 VDC power source or a 110 VAC or a 120 VAC power source. Provide and mount a D/C power source for the unit on the trailer. An adaptable 110 VAC or 120 VAC power source may be used when available and selected for use.

1. **D/C Powered:** Power the unit by means of a battery bank charged by photovoltaic solar panels and/or a built-in 110 VAC 10 amp battery charger. House the battery bank in a lockable heavy duty weatherproof box or cabinet. The battery bank shall have the capability to provide sufficient operating power to the unit for no less than 7 continuous days.
2. **A/C Powered:** Power the unit by means of a 110 VAC or 120 VAC power source. Equip the unit with ground fault circuit interrupter circuit breakers. Conduct all A/C power adaptations with UL approved equipment and methods.

C. Remote Control: Equip each AFAD unit with a controller capable of receiving and implementing instructions through wireless communications from a handheld transceiver. Also, equip each AFAD unit with a handheld transceiver that provides wireless communication with the unit controller to permit operation of the individual unit or the system by an operator or operators from remote locations. The system shall provide the capability for total system operation and control of both units by one operator from a primary handheld transceiver as well as allow independent unit operation by one operator per unit from unit specific handheld transceivers.

Monitor and verify data transmissions utilized to control the AFAD units. Digitally encode signal transmissions to minimize interference. Comply with all applicable requirements of the Federal Communications Commission. In the event communications are disrupted or lost, the system shall go into a “fail safe” mode and display the “Circular Red” / “STOP” indications and lower the gate arms.

D. Gate Arm: Equip each AFAD unit with an automated gate arm that descends to a down position across the travel lane that approaching traffic is operating in when the AFAD unit displays the condition for approaching traffic to stop. The automated gate arm shall ascend to an upright position when the AFAD unit displays the condition to allow stopped traffic to proceed past the location of the AFAD unit.

Acceptable operation of the gate arm shall require the gate arm to begin descent to the down position no less than 2 seconds or more than 4 seconds after the AFAD unit displays the condition for approaching traffic to stop. The gate arm shall begin ascent to the upright position not less than 1 second or more than 2 seconds prior to display of the condition to allow stopped traffic to proceed.

The gate arm shall measure no less than 8 feet in length and shall have a minimum vertical height of 4 inches when placed in the down position. Reflectorize both sides of the gate arm with a Type III Microprismatic retroreflective sheeting with vertical alternating red and white stripes at 16 inch intervals.

The gate arm shall deflect in the event an errant vehicle drives through and strikes the gate arm and then return to a functional position after the errant vehicle clears the gate arm.

E. Trailer: Fabricate and equip each trailer with a single axle, springs, support assembly and four (4) leveling or stabilizer jacks. Properly equip the trailer to comply with South Carolina Law governing motor vehicles. The minimum requirement for lights and reflectors shall include turn signals, dual tail lights, and brake lights. Equip each trailer with Safety chains meeting SAE J-697 standards and paint each trailer with Federal Standard No. 595, Orange No. 12246.

Each trailer mounted AFAD unit shall have the capability to withstand winds up to 80 MPH without overturning when in the operating configuration or position.

4. Type I “RED / YELLOW” Lens System:

A Type I “RED / YELLOW” Lens AFAD system shall alternately display a steadily illuminated Circular RED lens and a flashing Circular YELLOW lens to control traffic without the need for a “human flagger” in the immediate vicinity of the AFAD unit. The steadily illuminated Circular RED lens shall illuminate when approaching traffic is required to stop and the flashing Circular YELLOW lens shall illuminate when stopped or approaching traffic is permitted to proceed pass the location of the AFAD unit.

A RED / YELLOW Lens AFAD unit shall have no less than one set of Circular RED and Circular YELLOW lenses in a vertical configuration that have diameters of no less than 12 inches. Arrange the lenses to place the Circular RED above the Circular YELLOW and provide a minimum height of no less than 7 feet from the bottom of the apparatus housing the Circular YELLOW lens to the grade elevation of the travel lane under control of the AFAD unit. However, if the lenses are located over any portion of a travel lane in which traffic is operating and may pass underneath the lenses, the minimum mounting height shall be no less than 15 feet from the bottom of the apparatus housing the YELLOW lens to the grade elevation of the travel lane under control of the AFAD unit in which traffic is operating.

The gate arm shall begin its descent to the down position not less than 2 seconds or more than 4 seconds after the Circular RED lens is illuminated. The automated gate arm shall begin its ascent to the upright position not less than 1 second or more than 2 seconds prior to illumination of the flashing Circular YELLOW lens.

Install a “Stop Here On Red” sign (R10-6-36) or (R10-6a-30) on the right side of the approach at the point at which motorists are expected to stop when the Circular RED lens is illuminated.

Transition Between RED and YELLOW Conditions -

Transition to Circular RED condition - The flashing Circular YELLOW lens shall enter into a minimum 5 second steady illumination phase prior to transitioning to the

steadily illuminated Circular RED condition. The gate arm shall begin its descent not less than 2 seconds or more than 4 seconds after the Circular RED lens is illuminated.

Transition to Circular YELLOW condition - The gate arm shall complete its ascent to the upright position not less than 1 second or more than 2 seconds prior to illumination of the flashing Circular YELLOW lens. The steadily illuminated Circular RED lens shall transition to the flashing Circular YELLOW lens.

The Type I “RED / YELLOW” Lens AFAD system shall include a fail-safe system with a conflict monitor or similar device to prevent display of conflicting indications between units. Also, the system shall provide indicators to notify the operators of power loss that may impede proper operation of the system.

5. Type II “STOP / SLOW” Sign System:

A Type II “STOP / SLOW” Sign AFAD system shall have a STOP / SLOW sign that alternately displays the STOP (R1-1-36) face and the SLOW (W20-8-36) face of a STOP / SLOW paddle to control traffic without the need for a “human flagger” in the immediate vicinity of the AFAD unit. The STOP sign face shall display when approaching traffic is required to stop and the SLOW sign face shall display when stopped or approaching traffic is permitted to proceed pass the location of the AFAD unit.

The STOP / SLOW sign, fabricated from a rigid material, shall have an octagonal shape with a minimum face size of 36 inches by 36 inches. Reflectorize each face of the sign with a Type VII, Type VIII or Type IX Prismatic Retroreflective sheeting included on the latest edition of the *SCDOT Qualified Products List 20*. The STOP sign face shall have a red background with white letters and border and the SLOW sign face shall have a diamond shaped orange background with black letters and border. The letters shall have a minimum height of 8 inches. The sign faces shall have a minimum mounting height of 7 feet from the bottom of the sign to the grade elevation of the travel lane under control of the AFAD unit.

Supplement the Type II “STOP / SLOW” Sign AFAD unit with active conspicuity devices. Include a steadily illuminated RED lens beacon to illuminate when the STOP sign face is displayed and a flashing YELLOW lens beacon to illuminate when the SLOW sign face is displayed. Each beacon shall have a 12 inch signal lens. Mount the RED lens beacon no more than 24 inches above the top of the STOP sign face and YELLOW lens beacon no more than 24 inches above the top or to the side of the SLOW sign face.

Type B warning lights are PROHIBITED as alternatives to the 12 inch signal lens beacons.

The gate arm shall begin its descent to the down position 2 seconds or more than 4 seconds after the transition to a complete display of the STOP sign face is accomplished and the illumination of the steadily illuminated RED lens beacon. The automated gate arm shall begin its ascent to the upright position not less than 1 second or more than 2 seconds prior to the initiation of the transition from the STOP sign face to the SLOW sign face.

Install a “Wait On Stop” sign (R1-7-30) and a “Go On Slow” sign (R1-8-30) either on the same support structure as the AFAD unit or immediately adjacent to the AFAD unit.

Transition Between STOP and SLOW Conditions -

Transition to STOP condition - The RED lens beacon shall enter into a “flashing mode” no less than 5 seconds prior to transitioning from the SLOW sign face to the STOP sign face. Immediately upon completion of the transition to complete display of the STOP sign face, the “flashing mode” of the RED lens beacon shall transition to a steadily illuminated condition. The gate arm shall begin its descent in not less than 2 seconds or more than 4 seconds after completion of the transition to a complete display of the STOP sign face and illumination of the steadily illuminated RED lens beacon.

Transition to SLOW condition - The STOP sign face shall begin the transition to the SLOW sign face. The gate arm shall begin its ascent to the upright position not less than 1 second prior to the initiation of the transition from the STOP sign face to the SLOW sign face. The RED lens beacon shall cease to illuminate and the flashing YELLOW lens beacon shall begin to illuminate immediately upon completion of the transition of the STOP sign face to the SLOW sign face and the ascent of the gate arm to its completed upright position.

The Type II “STOP / SLOW” Sign AFAD system shall include a fail-safe system with a conflict monitor or similar device to prevent display of conflicting indications between units. Also, the system shall provide indicators to notify the operators of power loss that may impede proper operation of the system.

3. Method of Measurement: Unless otherwise specified, Automated Flagger Assistance Device Systems (AFAD’s) are not measured for separate payment but are included in the contract lump sum bid price item Traffic Control as specified in Subsections 107.12 and 601.5 of the *2007 Standard Specifications for Highway Construction*.

4. Basis of Payment: Unless otherwise specified, payment for an Automated Flagger Assistance Device System (AFAD) is included in the contract lump sum bid price item Traffic Control as specified in Subsections 107.12 and 601.5 of the *2007 Standard Specifications for Highway Construction*. The payment shall be full compensation for providing, installing, removing, and relocating as necessary, operating, and maintaining an Automated Flagger Assistance Device System (AFAD). Payment shall include furnishing all labor, hardware, equipment, tools, incidentals, and any miscellaneous items necessary for installing, operating, and maintaining the system.

September 1, 2013

**WORK ZONE TRAFFIC CONTROL
TRAINING REQUIREMENTS
FOR
CONTRACTORS / SUBCONTRACTORS**

1. Description:

This specification details the work zone traffic control training requirements for employees and representatives of a contractor or subcontractor under contract to the South Carolina Department of Transportation (SCDOT) whose job duties include responsibilities relative to implementation and maintenance of the Transportation Management Plan (TMP). “Employees and representatives of a contractor or subcontractor” will henceforth be referred to as “employee” or “employees” and “contractor or subcontractor” will henceforth be referred to as “contractor”.

The SCDOT requires the contractor to provide documentation to substantiate successful completion and attainment of a passing score of a prescribed training course conducted by an SCDOT approved provider by those employees whose job duties categorize them as “designated trainees” as defined hereinafter.

2. Implementation:

These requirements for work zone traffic control training for employees of those entities under contract to the SCDOT whose job duties include responsibilities relative to implementation and maintenance of a TMP shall become effective on all projects let to contract after September 1, 2013.

3. Designated Trainees:

An employee whose job duty responsibilities, as designated hereto, impact or involve any of or all of the components of a TMP must successfully complete an advanced work zone traffic control training program. These components include the primary component, the “Temporary Traffic Control” plan, and the secondary components, the “Transportation Operations” plan and the “Public Information” plan.

An employee whose job duties include any of the following responsibilities regarding the TMP shall successfully complete an advanced work zone traffic control training program conducted by an SCDOT approved work zone traffic control training provider:

- Supervision of the field installation of any or all components of the TMP
- Supervision of the maintenance of any or all components of the TMP
- Supervision of the removal of any or all components of the TMP
- Design and development of revisions to an existing TMP
- Design and development of a new or alternate TMP
- Any decision-making responsibilities regarding the TMP

Those employees whose job duties do not include responsibilities relative to the TMP as stated above are not required to attend an advanced work zone traffic control training program.

However, it is recommended that all employees whose job duties place them on the job site within the highway rights-of-way within 30 feet or less of a travel lane open to traffic should attend a basic work zone traffic control training course.

Also, an employee whose job duties include “flagger” shall successfully complete a “Flagger Training” course. However, regarding an employee whose job duties include “flagger” but does not involve any of the responsibilities listed above, successful completion of a “Flagger Training” course is the only mandatory work zone traffic control training course required for this employee; other work zone traffic control training courses are elective.

4. Approved Work Zone Traffic Control Training Providers:

The SCDOT recognizes the following organizations as acceptable providers of an advanced work zone traffic control training program, a “Flagger Training” course or the optional basic work zone traffic control training course:

American Traffic Safety Services Association (ATSSA)
Institute for Transportation Research and Education at North Carolina State University (ITRE)
Carolinas Association of General Contractors (AGC)
National Safety Council South Carolina Chapter

These organizations provide work zone traffic control training in compliance with the MUTCD and reference requirements specific to SCDOT. Therefore, work zone traffic control training provided by entities other than those listed above are not considered comparable and shall be unacceptable.

Specific course material for work zone traffic control training courses designated as “Basic”, “Advanced”, “Supervisor” or “Flagger” and any additional training courses not specified here is determined by the work zone traffic control training course provider and has undergone review and received acceptance by SCDOT. Also, the passing score for each training course is determined by the work zone traffic control provider.

5. Training Requirements / Qualifications:

Successful completion of an advanced work zone traffic control training program is defined as achieving a passing score in all courses, including any prerequisite courses, to attain a level considered “advanced”, “supervisor” or any other relative term as designated by the provider to imply the trainee has an understanding of the course material inclusive of design, implementation and maintenance of work zone traffic control scenarios. Upon successful completion of the program, the trainee should also possess an understanding for determining the need for and developing and implementing adjustments as necessary when applying typical work zone traffic control applications to non-typical work site conditions and scenarios.

The employee whose job duty responsibilities mandate successful completion of an advanced work zone traffic control training program shall do so prior to performing any job duties with responsibilities relative to design and development of a TMP or revisions of an existing TMP or any decision-making responsibilities regarding the TMP or supervision of the field installation and maintenance of any and all components of the TMP.

Also, an employee whose job duties mandate successful completion of a “Flagger” training course shall do so prior to performing any job duties relative to flagging traffic.

Each employee who has successfully completed an approved advanced work zone traffic control training program or a “Flagger” training course shall attend and complete a refresher course relative to the employee’s job duties on a 5-year incremental time frame.

6. Documentation:

The contractor shall provide proof of successful completion of an acceptable advanced work zone traffic control training class by those employees whose job duty responsibilities mandate successful completion of approved work zone traffic control training to the Resident Engineer prior to the employee performing the job duties that incorporate responsibilities which necessitate approved work zone traffic control training. For proof of successful completion of an approved work zone traffic control training class, provide a copy of the certificate of training from the organization who conducted the training to the Resident Engineer. Failure to provide the required documentation as specified shall prevent SCDOT acceptance of the employee as properly trained and acceptable for conducting those job duties that necessitate the prescribed work zone traffic control training.

The contractor shall provide proof of successful completion of an acceptable “Flagger Training” course by all employees whose job duties require them to be the “Flagger” within a flagging operation to the Resident Engineer prior to the employee performing any “Flagger” job duties.

The contractor shall provide proof of successful completion of an acceptable advanced work zone traffic control refresher course for those employees no later than 60 days beyond the 5 year anniversary date of the employee’s certificate date of completion of a previous advanced work zone traffic control training program.

Documentation of proof of completion of a basic work zone traffic control training course by employees whose job duties require their presence on the job site within the highway rights-of-way but exclude any responsibilities relative to the TMP is not required.

July 1, 2018

ASSISTANCE BY HIGHWAY PATROL AND LOCAL LAW ENFORCEMENT

Subsection 610.4.5.2, Temporary Road Closures, Requirements, of the Standard Specifications: Replace Paragraph 2 with the following:

2 Use the assistance of the South Carolina Highway Patrol or local law enforcement when it is necessary to stop traffic. Coordinate the traffic control with the RCE and either the Highway Patrol or local law enforcement agency.

Subsection 610.4.7.2, Pacing Operation, Requirements, of the Standard Specifications: Replace Paragraphs 2 and 3 with the following:

2 Use the assistance of the South Carolina Highway Patrol or local law enforcement when it is necessary to implement a pacing operation. Coordinate the traffic control with the RCE and either the Highway Patrol or local law enforcement agency.

3 Assistance from the South Carolina Highway Patrol or local law enforcement is required when a pacing operation is implemented. Have Highway Patrol troopers or local law enforcement officers intercept traffic in advance of the project site at a distance sufficient to provide a work period of 20 minutes or less. Close all on-ramps within the affected area in advance of the project site until the queue of controlled traffic has passed. Station Highway Patrol troopers or local law enforcement officers at the point of closure of each on-ramp.

Subsection 611.4.5.2, Installation and Removal of Overhead Signs and Structures, Requirements, of the Standard Specifications: Replace Paragraph 4 with the following:

4 Use assistance from the South Carolina Highway Patrol or local law enforcement when it is necessary to stop or pace traffic. Coordinate the traffic control procedure with the RCE and either the Highway Patrol or local law enforcement agency as necessary.

April 1, 2013

CONCRETE BATCHING AND MIXING IN COLD AND HOT WEATHER

Delete Subsections 701.4.4.2 and 701.4.4.3 in their entirety and replace them with the following:

701.4.4.2 Batching and Mixing in Cold Weather

When batching and mixing concrete at atmospheric temperatures below 50oF as determined by the RCE, ensure measures are implemented to provide batched concrete with a temperature of at least 50oF when placed in the forms. Batch and mix concrete at atmospheric temperatures below 35oF only when permitted by the RCE. Implemented measures may include but are not limited to the following:

- A. Replacing a portion of the design mix water with heated water not exceeding 170oF at discharge into the mixer.
- B. Heating aggregates by steam, dry heat, or placing in heated mixing water. Any aggregate heating method or apparatus used shall heat the aggregates uniformly without creating hot spots.

Aggregates that contain ice, frost, or frozen particles shall not be used in the concrete mix. When either aggregates or water are heated above 100oF, combine aggregate and a portion of the water prior to adding cement to avoid flash set. Cement may be added with water or with a mixture of water and aggregate having a temperature less than 100oF.

Do not implement alternate measures to those listed above without prior approval by the RCE.

Recommendations provided in ACI 306R, Guide to Cold Weather Concreting maybe used to meet the requirements of this subsection with RCE approval.

The contractor retains the responsibility for producing concrete that meets the requirements of the plans, specifications, and special provisions.

701.4.4.3 Batching and Mixing in Hot Weather

When batching and mixing concrete in hot weather, ensure measures are implemented to prevent the concrete mix temperature from exceeding 90oF measured before placement in the forms, unless specified otherwise. For Class 2500, do not allow the concrete mix temperature to exceed 95oF. For mass concrete pours, do not allow the concrete mix temperature to exceed 80oF as measured at discharge into the forms. This requirement does not apply to concrete used in precast/prestressed members.

Implemented measures to meet mix temperature requirements may include but are not limited to the following:

- A. Using Type II cement.
- B. Sprinkling coarse aggregate with water to cool by evaporation.
- C. Using chilled mixing water or cubed/crushed ice to replace part of the mixing water. If using ice, ensure the ice melts before batch is discharged from mixing unit.
- D. Scheduling pours during cooler portions of the day.

Do not implement alternate measures to those listed above without prior approval by the RCE.

Recommendations provided in ACI 305R, Guide to Hot Weather Concreting may be used to meet the requirements of this subsection with RCE approval.

The contractor retains the responsibility for producing concrete that meets the requirements of the plans, specifications, and special provisions.

April 1, 2013

CONCRETE BATCHING AND MIXING

Delete subsection 701.4.4.1 Concrete Batching and Mixing – General, of the Standard Specification and replace it with the following:

701.4.4 Concrete Batching and Mixing

701.4.4.1 General

1. When concrete is furnished by a transit or central-mix plant, use batching equipment that is sufficient to weigh a load of the required size in less than 15 minutes.
2. Make certain that an SCDOT-certified concrete field technician is present at the plant when concrete is being produced for SCDOT work. The SCDOT-certified concrete field technician may be an employee of the Contractor, the concrete supplier, or an independent testing laboratory. While concrete is being produced for SCDOT work, ensure that the SCDOT-certified concrete field technician's sole, full-time responsibility is to maintain quality control records and conduct physical testing of concrete and its constituent materials.
3. Ensure that an SCDOT-certified concrete field technician completes and signs *Form 700.04* for the first load of each class of concrete delivered to the job site each day. After the completion of *Form 700.04* for the first delivered load, subsequent loads of each class of concrete will require *Form 700.04* or an OMR pre-approved batch ticket containing the appropriate information. A batch ticket may be pre-approved for use in SCDOT work through the Structural Materials Engineer if the batch ticket format contains at a minimum: date and time batched, load size, ticket number, aggregate moistures, amount of free water in aggregates, design target weights or measures for all materials, actual batch weights or measures for all materials, batched variances from targets listed as a percentage for all materials, designed water/cementitious materials ratio, batched water/cementitious materials ratios, designed batch water in gallons, actual batch water in gallons, and water in gallons held back from target value at the plant that can be added at the job site.
4. Except for Class 2500 concrete, prestressed concrete, and precast concrete, the Department will not accept concrete unless a completed *Form*
5. *700.04* or preapproved batch ticket that is signed and certified by the SCDOT-certified concrete technician, accompanies the delivery of the concrete. If a pre-approved batch ticket is being used and conditions warrant that the use of a batch ticket is unacceptable to the RCE, the SCDOT-certified concrete technician will discontinue using the batch ticket for acceptance and return to the use of *Form 700.04* until such time that the deficiencies of the batch ticket have been resolved and accepted by the RCE.
6. Provide sufficient advance notification to the [RCE](#) as to the name of the plant supplying the concrete in order to permit time to make the necessary arrangements for inspection of equipment at the plant.

May 5, 2014

PORTLAND CEMENT AND PORTLAND CEMENT CONCRETE

Subsection 701.2.1.1 Materials – Portland Cement - General, of the 2007 Standard Specifications is amended to add the use of Type IL Portland-limestone cement in addition to the materials given.

Add the following to Subsection 701.2.1.1 Materials – Portland Cement- General:

Type IL Portland-limestone cement may be used instead of Type I and Type II cement. If used, furnish Type IL cement conforming to the requirements of AASHTO M 240 and obtain from sources listed on the most recent edition of SCDOT Qualified Products 86. Provide an intimate and uniform blend of Portland cement and limestone. In any case, make certain that the limestone constituent is less than 15% of the total weight of the Portland-limestone cement.

Delete Subsection 701.4.9 – Construction – Fly Ash and Water-Granulated Blast-Furnace Slag - Items A and C of the 2007 Standard Specifications in their entirety and replace with the following:

A. Fly ash or water-granulated blast furnace slag may replace allowable percentages of Type I, Type II, or Type III Portland cement or Type IL Portland-limestone cement. Do not use fly ash or slag replacement for mixes using Type I (SM) or Type IP blended cements.

C. When fly ash is used to replace the Portland and Type IL Portland-limestone cement, replace at a ratio of not less than 1.2:1 by weight, and do not replace more than 20% of the cement originally called for in the mixture.

April 1, 2013

CONCRETE STRUCTURES – PERFORMED JOINT FILLER

Delete Subsection 702.2.2.1 of the Standard Specifications in its entirety and replace it with the following:

702.2.2.1 Preformed Joint Filler

Use preformed joint material that meets AASHTO M 153 or AASHTO M 213 with the following exceptions:

1. Use only materials manufactured from rubber.
2. Use materials that require a load of not less than 340 kPa or greater than 5200 kPa to compress to 50% of its thickness when tested in accordance with AASHTO T 42.
3. Use materials that have a recovery of at least 70% when tested in accordance with AASHTO T 42.

Use preformed joint material that is listed on QPL 81.

Provide a manufacturer's certification that states that the material conforms to SCDOT specifications.

July 1, 2018

REINFORCING STEEL

The 2007 SCDOT Standard Specifications is amended as follows:

Delete every occurrence of “ASTM A 706” and replace with “AASHTO M 31, Type W.”

Delete Subsection 703.2.1 in its entirety and replace it with the following:

703.2.1 Reinforcing Bars

Provide reinforcing bars (rebar) and dowels that meet the requirement of AASHTO M 31, Type W with a minimum single yield strength level of 60,000 psi, designated as Grade 60 and are from a source listed on the most recent edition of SCDOT Qualified Product List 60.

Each shipment of rebar delivered to the project must be accompanied by the manufacturer’s mill test report for each heat included in the delivery. The mill test report must include the following:

- a) Producer information
- b) Heat number and size of rebar represented by the report
- c) The grade for which the steel qualifies
- d) Tensile test results including yield strength, tensile strength and elongation
- e) Statement ensuring that the steel was melted and manufactured in the United States

703.2.1.1 Quality Assurance (QA) Sample Requirements

Acceptance or rejection of all reinforcing steel, with the exception of those described in **Subsection 703.2.1.2**, is based on samples taken in the field by the SCDOT inspector or observed being taken in field by the SCDOT inspector and tested in conformance with the requirements of AASHTO T 244 by the OMR or an OMR authorized AASHTO accredited testing laboratory. One 30 inch sample is required each calendar month for each rebar size from each rebar producer from rebar delivered to the project in that calendar month. No sample is required in any calendar month for any rebar size or producer for which no shipments are made to the project. Each sample must include one complete set of the bar’s mill markings.

Once a rebar sample is obtained, the sample must remain in the custody of the SCDOT inspector until delivery to the OMR or OMR authorized AASHTO accredited testing laboratory. Samples delivered to the OMR by the contractor will not be accepted.

Any samples failing to meet the requirements of Subsection 703.2.1 require two check samples of the same heat and rebar size. If either of the check samples fails, the heat represented is not to be used in the work and a sample must be taken from every size of every shipment of rebar produced by the same rebar producer for the remainder of the project.

703.2.1.2 Coiled Rebar

With the exception of Ultimate Butt-Welded Splices and bars included in **Subsection 703.2.1.3**, all rebar shipped in a coiled state from the producer listed on the most recent edition of SCDOT

Qualified Product List 60 must be sampled after mechanical straightening as used in the project. These samples must meet all specifications of AASHTO M 31, Type W as shipped to the project.

703.2.1.3 Reinforcing Bars Exempt from Acceptance Sampling and Testing

With the exception of Ultimate Butt-Welded Splices, reinforcing bars bent prior to shipment to the project that have no straight lengths 5-ft or longer will be accepted based upon a manufacturer's certified mill test report from a rebar producer listed on the most recent edition of Qualified Products List 60.

Delete Subsections 703.2.4 and 703.2.5 in their entirety and replace them with the following:

703.2.4 Mechanical Couplers for Reinforcing Steel

703.2.4.1 General

Use mechanical coupler components that are compatible with the reinforcing bars specified in **Section 703** and manufacture all splices with the mechanical couplers as specified and detailed on the Plans. In selecting a coupler, consider the clearance requirements for correct installation and proper alignment of the reinforcing after installation. Use mechanical couplers listed on the most recent edition of SCDOT Qualified Product List 73 for the category of coupler required.

703.2.4.2 Materials

703.2.4.2.1 General

A LOT of mechanical couplers is defined as 150, or fraction thereof, of the same type of mechanical coupler used for each bar size and each bar deformation pattern that is used in the work. For ultimate mechanical couplers, the length of the coupler must be less than 10 times the nominal bar diameter. Use service couplers only in locations indicated on the design drawings. Ensure that mechanical couplers meet the following specifications when tested with AASHTO M 31, Type W rebar:

- a) Cyclic and Fatigue tests (current version of Caltrans Test 670)
- b) Tensile test (AASHTO T 244) – For ultimate mechanical couplers, a minimum tensile strength of 80 ksi, or 125% of the actual yield strength of the reinforcing bar, whichever is greater. For service couplers, at least 125% of the specified minimum yield strength of the reinforcing bar.
- c) Slip test – according to the table listed in Section 52-6.02B of the 2015 edition of Caltrans Standard Specifications.

703.2.4.2.2 Manufacturer's Certification

Provide to the RCE a certified statement from the manufacturer of each type of mechanical coupler used that includes the following information:

- a) A description of the device, including dimensions, designations, material specifications, and the specific model name.

- b) A description of the method of packaging and identification
- c) A statement that the product meets the requirements of Section 703 of SCDOT specifications
- d) Detailed installation instructions

703.2.4.3 Quality Assurance (QA) Sample Requirements

For each LOT (as defined in **Subsection 703.2.4.2.1**) of each splice size, one complete sample of a mechanical coupler assembled using reinforcing bars of the same heat number used in the work will be randomly obtained at the project site by the RCE prior to being incorporated into the work and submitted to the OMR for testing. Ensure that sample of complete reinforcing bars with coupler splice meet the requirements of **Subsection 703.2.4.5.1**. If the sample fails, two check samples of couplers from the same LOT for testing meeting the requirements of **Subsection 703.2.4.5.2** are required.

If one or both of the check samples fail, the LOT of couplers is rejected and should not be used in the work.

Once a coupler sample is obtained, the sample must remain in the custody of the SCDOT inspector until delivery to the OMR or OMR authorized AASHTO accredited testing laboratory. Samples delivered to the OMR by the contractor will not be accepted.

703.2.4.3.1 Test Sample Requirements

Each sample must meet the following requirements:

- a) A minimum of 30 inches in length with the coupler located at the mid-point
- b) Accompanied by a Certified Mill Test Report for that bar's heat number
- c) Suitably identified before shipment with weatherproof markings

Ensure that all sample test results are satisfactory before encasing any mechanical coupler splices in concrete. If a mechanical coupler splices is encased before receiving notification from the RCE, it is expressly understood that any material not conforming to these specifications will be subject to rejection, and the replacement of removed material shall be done at no additional time or cost to the Department.

703.2.4.3.2 Test Criteria

The OMR will test the tensile strength of the sample splice in conformance with the requirements of AASHTO T 244 to ensure that the splice achieves an ultimate strength of at least:

- a) 75,000 psi for service splices
- b) 80,000 psi for ultimate splices

703.2.4.3.3 Check Sample Requirements

Each mechanical coupler check sample must meet the following requirements:

- a) Rebar must extend a minimum of 15 inches beyond both ends of the coupler
- b) Accompanied by a 30 inch sample of rebar of the same heat used in the work and in the coupler assembly
- c) Suitably identified before shipment with weatherproof markings

703.2.4.4 Handling and Storage

Protect exposed threaded bars on staged work by installing the threaded coupler on the in-place bar and capping the open end of the coupler per the manufacturer's instructions. Immediately before installation, check the threads and ease of rotation of any threaded parts of couplers to detect contamination that could cause binding. Regardless of the method of mechanical coupling used, prevent damage to or contamination of the reinforcing or coupling devices that will inhibit or negatively affect the certified behavior of the device. If in the opinion of the RCE, such damage or contamination exists, replace the reinforcing, couplers, or both, or remove the contamination to the satisfaction of the RCE at no additional time or cost to the Department.

703.2.5 Ultimate Butt-Welded Splices (UBWS)

703.2.5.1 Material

Use UBWS containing steel that conforms to the requirements of Subsection 703.2.1. Use only UBWS produced utilizing a resistance (flash) welding process by a fabricator listed on Qualified Product List 103 for the hoop diameter and bar size required.

703.2.5.2 Quality Assurance (QA) Test Requirements

703.2.5.2.1 General

A UBWS LOT is defined as a shipment of the same type of UBWS used for each bar size and each heat number that is used in the work. One test sample will be randomly selected by the RCE at the project site for each rebar size and shipment of material for the work and submitted to the OMR for testing.

Once a UBWS sample is obtained, the sample must remain in the custody of the SCDOT inspector until delivery to the OMR or OMR authorized AASHTO accredited testing laboratory. Samples delivered to the OMR by the contractor will not be accepted.

703.2.5.2.2 Test Sample Requirements

Each sample must meet the following requirements:

- a) A minimum of 30 inches in length with the splice located at mid-point,
- b) Accompanied by a Certified Mill Test Report for that bar's heat number, and
- c) Suitably identified before shipment with weatherproof markings.

Ensure that all sample test results are satisfactory before encasing any splices in concrete. If any splices are encased before receiving notification from the RCE, it is expressly understood that any material not conforming to these specifications will be subject to rejection, and the replacement of removed material shall be done at no additional time or cost to the Department.

703.2.5.2.3 Test Criteria

The OMR will test the tensile strength of the sample splice in conformance with the requirements of AASHTO T 244 to ensure that the UBWS achieves at least 100 percent of the specified ultimate tensile strength of the reinforcing bar.

If a sample fails, two check samples from the same LOT for testing by OMR are required. Any material not conforming to the requirements herein will be subject to rejection. If the sample splice fails to conform to these provisions, all splices in the LOT represented by the QA tests will be rejected.

Do not mix or combine the LOTS of UBWS being tested before the successful completion of the QA tests.

703.2.5.2.4 Corrective Action

Whenever a LOT of UBWS is rejected, fulfill the following requirements before using additional UBWS in the work:

Perform a complete review of the producer's quality control process for these splices. Submit a written report to the SCDOT Structural Steel Engineer describing the cause of failure for the splices in this LOT and provisions for correcting the failure in future LOTS. Ensure that the Structural Steel Engineer has provided the RCE notification that the report is acceptable. The Structural Steel Engineer will have 15 business days to review the report and notify the RCE of the report's status. The RCE will have 10 business days after notification to determine the course of action for the project.

If a QA test for any LOT fails, replace all reinforcing bars representing failing sample splices before the RCE selects additional splices from the replacement for further testing.

When sampled bars are repaired with a pre-qualified Ultimate Mechanical Coupler as described in Subsection 703.2.4, QA tests are not required on the repaired splices.

Delete **Subsection 703.4.3; Paragraph 2** and replace it with the following:

(2) Hold the reinforcement together by tie wire at all intersections except where the spacing is 12 inches or less in each direction, in which case tie alternate intersections. Hold bars projecting beyond a construction joint in place by templates during concreting to ensure proper position. Do not tack weld reinforcing

January 1, 2018

EROSION CONTROL MEASURES

Delete Subsection 810.4.2 of the Standard Specifications in its entirety and replace with the following:

In addition to the erosion control measures specified in the Plans, Standard Specifications, Supplemental Technical Specifications and the Special Provisions, the Contractor is advised that all land disturbing activities (clearing and grubbing, excavation, borrow and fill) are subject to the requirements set forth in the following permits and regulations:

- South Carolina Code of Regulations 63-380, Standard Plan for Erosion, Sediment, and Stormwater Runoff Control. The regulation can be found at the South Carolina Legislature website.
- Erosion and Sediment Reduction Act of 1983 (Title 48, Chapter 18 of the South Carolina Code of Laws of 1983, as amended). Section 70 of this code authorized the South Carolina Department of Health and Environmental Control (SCDHEC) to administer this regulation with respect to lands under the jurisdiction of the South Carolina Department of Transportation. The code can be found at the South Carolina Legislature website.
- National Pollutant Discharge Elimination System (NPDES) General Permit Number SCR160000, effective January 1, 2013 (or latest version): The Environmental Protection Agency, in accordance with the Federal Clean Water Act, has granted to the South Carolina Department of Health and Environmental Control (SCDHEC) the authority to administer the Federal NPDES permit program in the State of South Carolina. The permit may be viewed at the SCDOT website.

In accordance with the NPDES General Permit SCR160000 section 2.1.E: “The Prime Contractor hired by SCDOT for a project will become a Secondary Operator with SCDOT upon signing the awarded contract. The Secondary Operator must complete the agreement found in Appendix B of the SCDOT Contract, (Contractor Certification Form). The agreement is to be signed in accordance with the signatory requirements of §122.22 of the South Carolina Regulation 61-9. The agreement is to be maintained with the SWPPP.

By signing the Contract, the contractor accepts/understands the terms and conditions of the Storm Water Pollution Prevention Plan (SWPPP) as required by the NPDES General Permit SCR160000 and may be legally accountable to SCDHEC for compliance with the terms and conditions of the SWPPP. In addition the contractor is responsible for ensuring all subcontractors comply with the SWPPP and the permit requirements.

The SCDOT will complete and forward a Notice of Intent (NOI) to SCDHEC. If SCDHEC does not send a letter within 10 business days of receipt of the NOI, authorizing coverage, denying coverage, or advising that a review of the SWPPP will take place, coverage will be automatically granted.

At the pre-construction conference, with the contractor, the SWPPP will be explained and discussed so that the contractor is made aware of their responsibilities in the SWPPP.

Upon authorization of coverage, the SWPPP is to be fully implemented. The prompt installation of erosion control devices should be coordinated with construction activities to maintain compliance with the above regulations and NPDES General Permit.

Erosion and Sediment Control Inspections are to be conducted by a qualified individual (Certified Erosion Prevention and Sediment Control Inspectors (CEPSCI), P.E., or those as stated in the permit) by the Department at least every 7-calendar days. A representative of the Contractor is also encouraged to accompany the inspection. Correct deficiencies noted during these inspections within the assigned priority period. If deficiencies are not corrected within this timeframe, the RCE can stop all work (except erosion and sediment control measures) until the deficiencies are corrected.

Give special attention to critical areas within the project limits (i.e., running streams, water bodies, wetlands, etc.). In these areas, the RCE may direct the Contractor to undertake immediate corrective action, but in no case allow these deficiencies to remain unresolved more than 48 hours for a priority 1 deficiency or 7 days for a priority 2 deficiency. This is in accordance with their assigned priority as identified during the Erosion and Sediment Control Inspection.

Failure to adequately comply with the provisions as detailed above or any other required erosion control measures can result in stoppage of all contract operations (except erosion and sediment control measures) until corrective action has been taken. Additional sanctions may be invoked by the SCDHEC in accordance with their authority.

Fines assessed on the Department by SCDHEC as the result of the Contractor's non-compliance or violation of said permit provisions will be paid by the Department and will subsequently be deducted from any monies due or that may become due to the Contractor. In case no monies are due or available, the fines incurred will be charged against the Contractor's Surety.

January 1, 2018

GRADATION OF FINE AGGERGATES FA-10M

Replace the FA-10M gradation in the table, Gradation of Fine Aggregates, located in the Appendix of the Standard Specifications, with the following revised gradation:

Sieve Designation	Aggregate No.
	FA-10M
½-inch	--
¾-inch	100
No. 4	95-100
No. 8	75-100
No. 16	45-95
No. 30	25-75
No. 50	8-35
No. 100	0.5-20
No. 200	0-10*

PROMPT PAYMENT CLAUSE

(1) Subject to the provisions on retainage provided in Paragraph (2) below, when a subcontractor has satisfactorily performed a work item of the subcontract, the Contractor must pay the subcontractor for the work item within seven (7) calendar days of the Contractor's receipt of payment from SCDOT. A subcontractor shall be considered to have "satisfactorily performed a work item of the subcontract" when the SCDOT pays the Contractor for that work item.

(2) The Contractor may withhold as retainage up to five (5%) percent of a subcontractor's payment until satisfactory completion of all work items of the subcontract. "Satisfactorily completion of all work items of the subcontract" shall mean when the SCDOT pays the Contractor for the last work item of the subcontract. The Contractor must release to the subcontractor any retainage withheld within seven (7) calendar days from the date the Contractor receives payment from SCDOT for the last work item of the subcontract.

(3) Prior to receiving payment of each monthly estimate, the Contractor shall certify to SCDOT that the construction estimate is complete and that all subcontractors have been paid for work covered by previous estimates.

(4) Failure to comply with any of the above provisions shall result in one or more of the following sanctions: (1) no further payments to the Contractor unless and until compliance is achieved; (2) the Contractor being placed in default; and/or (3) the Contractor being declared delinquent, such delinquency being subject to procedures and penalties provided in 108.08 of the Standard Specifications.

UTILITY ALLOWANCES

1. GENERAL

1.1. RELATED DOCUMENTS

1.1.1. GENERAL: Requirements of the General and Supplemental Conditions apply to all Work in this Section. Provide all labor, material, equipment, and services indicated on the Drawings or specified herein or reasonably necessary for and incidental to a complete job.

2. PRODUCTS

2.1. STATED ALLOWANCES

2.1.1. GENERAL: The Contractor shall include in the Contract Sum the allowances stated herein. This allowance shall cover the net cost of the work performed by the utility company on the utility relocation required for the construction of the roadway and associated drainage and landscaping features. The stated allowance is intended for the adjustment or relocation of electrical and communication features within the area to be milled and paved. The Contractor's coordination, layout, field investigations, overhead, profit, and other expenses associated with utility relocations for the original allowance shall be included in the Contract Sum and not in the allowance. If the cost, when determined, is more or less than the allowance, the Contract Sum shall be adjusted accordingly by change order.

2.1.2. UTILITY RELOCATION ALLOWANCE: \$30,000

2.1.3. WORK NOT INCLUDED IN ALLOWANCE ITEM:

Utilities damaged during construction shall not be included in the Allowance Item.

Work associated with the separate bound plans for Georgetown County Water and Sewer District shall not be included in the Allowance Item

3. EXECUTION

3.1. GENERAL:

3.1.1. The Contractor shall notify the utility companies, coordinate schedule, and conduct the subsurface investigations required for the relocation of utilities by the respective utility company. This work shall be scheduled so as not to delay the work.

3.1.2. In the case of borderline conflicts, every effort shall be made, with the approval of the utility company and the Engineer, to adjust the work so a utility relocation can be avoided.

3.2. PAYMENT: The Contractor will direct the utility company to invoice the Contractor. The description of the work performed by the utility company shall be adequately identified on the invoice. Copies of the paid invoice shall be submitted with the Contractor's periodic payment request and compensation made from the allowance item.