PROJECT MANUAL

FOR

Petigru Drive Comprehensive Engineered Roadway Improvements: FY18

Bid No. 18-005

GEORGETOWN COUNTY, SOUTH CAROLINA

VOLUME I

DIVISION 0 – BIDDING AND CONTRACT DOCUMENTS

DIVISION 1 – GENERAL REQUIREMENTS

PREPARED BY:
GEORGETOWN COUNTY
DEPARTMENT OF PUBLIC SERVICES
PUBLIC WORKS DIVISION
AND
DAVIS & FLOYD ENGINEERS

April 27, 2018

VOLUME I - PROJECT MANUAL

April 27, 2018

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SECTION 00010
REQUEST FOR BIDS

Time Line: Invitation for Bid #18-005

Item	Date	Time	Location*
Date of Issue:	Friday, April 27, 2018	n/a	n/a
Pre-Bid Site Inspection:	INDEPENDENT (on own)	n/a	Project Site
Inquiry Cut-Off Time:	Wednesday, May 16, 2018	3:00 PM ET	Suite 239
Bids Must Be Received On/Before:	**Wednesday, May 30, 2018**	3:00 PM ET	Suite 239
Public Bid Opening & Tabulation:	**Wednesday, May 30, 2018**	3:00 PM ET	Suite 239
County Council Consideration:	Tuesday, June 26, 2018	5:30 PM ET	Chambers
Estimated Notice to Proceed Date:	Monday, July 09, 2018	n/a	n/a
Contract/Project Completion:	240 Days from NTP	n/a	n/a

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

Petigru Drive Comprehensive Engineered Roadway Improvements: FY18
Georgetown County, South Carolina
Bid #18-005

Written, sealed proposals for **Petigru Drive Comprehensive Engineered Roadway Improvements** in Georgetown County, SC will be received by the Purchasing Office, 2nd floor, Suite 239, 129 Screven St., Georgetown, SC 29440 until cut-off time shown in the Bid Time Line above. Bids will then be publicly and promptly opened and read aloud at the designated time by the Purchasing Officer. Bids that are not in the Purchasing Officer's possession prior to the stated opening date and time will be considered NON-RESPONSIVE and returned unopened. An official authorized to bind the Bid must sign all bid documents submitted.

MAILING ADDRESS:
County of Georgetown
Post Office Drawer 421270
Georgetown SC 29442-1270
Attn: Purchasing

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

One (1) unbound, reproducible ORIGINAL must be submitted in a sealed envelope and clearly marked on the outermost container as follows:

OFFEROR'S NAME
BID ITEM NAME
BID NUMBER

The Georgetown County Department of Public Works is seeking competitive bids from South Carolina Department of Transportation approved contractors for road improvements to Petigru Road in the Pawleys Island Community of Georgetown County. Work is scheduled to begin in the second quarter of 2018. The improvements may also include installation of new drainage. The limits of work are described herein along with details that describe specific items of work.

The Work Consists Of: re-grading, placing base course, and paving the county roadway, Petigru Drive, totaling approximately 0.523 miles. Quantities for this project are approximately 9,100 square yards of Graded Aggregate Base Course 6" uniform in depth, 2,633 cubic yards of Unclassified Excavation, 1,531 cubic yards of Borrow Excavation, Clearing and Grubbing within project limits, 1,040 Tons of Hot Mix Asphalt Surface Type C (175lbs./square yard), 890 Tons of Hot Mix Asphalt Intermediate Type C (200lbs./square yard), 75 tons of Hot Mix Asphalt Base Type B, and 580 linear feet of RC Class III storm drainage pipe ranging in size from 15" to 24".

The work performed under this Contract shall include, but may not be limited to: the furnishing of all labor, materials, equipment and services, whether specifically mentioned or not, that is required to complete the Construction of the Work of the project. All requirements of Georgetown County and all pertinent administrative regulations shall apply to this project as if herein written out in full.

Each proposer shall respond as provided more specifically herein, Section 00100, Instructions to Bidders, Paragraph IV Preparation and Submission of Bids. Proposals or amendments to proposals received after the proposal deadline will be considered as "Late Proposals" and will not be considered for any cause whatsoever. The Respondent shall sign his / her proposal correctly. All offers shall be entered in ink or typewritten. Proposals may be rejected if any omissions, alteration of form, additions not called for, or any irregularities of any kind are shown. Proposal envelopes or containers with amendments or changes written on the exterior will not be considered or opened. Respondents and their authorized representatives are invited to be present at the proposal opening.

Each bidder will be responsible to make their own INDEPENDENT site inspection and become familiar with on-site conditions prior to submitting a response.

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 sixty (60) calendar days. The selected Contractor is encouraged to utilize, to the extent possible, local firms and trades from within Georgetown County.

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. Bid Bonds 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.

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

Project Funding: Georgetown County SC Capital Improvement Finds (local funds)

Construction Contract Documents, including Bidding and Contract Documents, General Requirements, Plans and Technical Specifications may be viewed and downloaded on line at the County Website www.gtcounty.org, select "Bid Opportunities" from the *Quick Links* box on the homepage.

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.

TITLE VI COMPIANCE:

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.

END OF SECTION 00010

SECTION 00100
INSTRUCTIONS TO BIDDERS/PROPOSERS
Bid #18-005

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

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

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

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

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

2. **IMPORTANT OFFEROR NOTES:**
   a) Bid Number & Title must be shown on the OUTSIDE of the delivery package.
   b) Federal Express does NOT guarantee delivery to Georgetown, SC before 4:30 PM Eastern Time on Next Day Service.
   c) UPS WILL guarantee delivery to Georgetown, SC before 10:30 AM Eastern Time on Next Day "Early AM" Service.

3. Inclement Weather/Closure of County Courthouse
   If the County Courthouse is closed for business at the time scheduled for bid opening, for whatever reason, sealed bids will be accepted and opened on the next scheduled business day, at the originally scheduled time.

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. Each bidder must provide one (1) unbound, reproducible ORIGINAL of their bid submitted in a sealed envelope and clearly marked on the outermost container as follows:

   OFFEROR'S NAME
   BID ITEM NAME
   BID NUMBER

6. Bidders shall 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. 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.

10. Definitions:
    a) The terms "Proposer", "Offeror", 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 **Petigru Drive Comprehensive Engineered Roadway Improvements** or "road improvement 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 that those who cannot.

11. 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 reawarded or a new solicitation issued.

12. Faxed or E-mailed bids will not be accepted by Georgetown County.

13. 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.

14. 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.

15. 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.

16. The County reserves the right to reject any or all bids, waive any informality in bids and accept in whole or in part such bid or bids as may be deemed in the best interest of the County. Georgetown County reserves the right to reject any bid submitted, at sole option that the vendor may not be able to meet the service requirements of the bid.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. 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.

23. 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 subcontractor s 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.

24. ILLEGAL IMMIGRATION: Construction
By signing its bid or proposal, Contractor certifies that it will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agrees to provide to the State upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable both to Contractor and its subcontractors or sub-subcontractors; or (b) that Contractor and its 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." Contractor agrees to include in any contracts with its subcontractors language requiring its 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. (An overview is available at www.procurement.sc.gov)

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.gtcounty.org, select “Bid Opportunities” in the *Quick Links* box. It is each proposer’s responsibility to verify that all addenda have been received and acknowledged.

28. Form and Style of Bids
    a) Bids in the form of sealed proposals for the Construction of the Project will be received until the time and the date stated in Section 00010, Notice to Bidders.

    b) The Bid shall be submitted on the Bid Form provided; no other form is acceptable.

    c) The successful Bidder will be required to provide verified breakdown of costs of all services and work in a manner acceptable to the Owner.

    d) All blanks on the Bid Form shall be filled in, either typed or printed in ink. The person signing the bid shall initial all corrections or erasures.

    e) Where so indicated on the Bid Form, the Bid Sum shall be expressed in both words and figures; in case of a discrepancy between the two, the Sums expressed in words shall govern.

    f) Bid unit price on quantity specified -- extend and show total. In case of errors in extension, unit prices shall govern.

    g) Bidder shall quote all Alternates in the Bidding Documents. If Bidder fails to bid on all Alternates, then his/her Bid may be considered irregular, non-responsive and may be disqualified.

    h) Bids containing qualifications will be considered irregular, non-responsive and may be disqualified.

i) A Bid Form submitted by a partnership shall list the names of all partners and shall be signed in the partnership name by one of the members of the partnership who is authorized to sign for the partnership.

j) A Bid Form submitted by a corporation shall be executed in the legal name of the corporation, followed by the state of incorporation and signed by the President or Vice President or other authorized officer. The name of each person signing the Bid Form shall be typed or printed below the signature.

k) When the person signing for a corporation is other than the President or Vice President and when requested by the Owner, a resolution or other satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished for the Owner's records. The name of each person signing the Bid Form shall be typed or printed below the signature.

29. **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: User Fee 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

Minimum limits are $1,000,000 per occurrence.

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.

30. **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.state.sc.us/Frequently%20Asked%20Questions/FAQ.htm

31. 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.

32. 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.

33. 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.

34. 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.

35. Progress Payments

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

36. South Carolina Sales Tax

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

37. Assignment of Contract

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

38. Termination

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

a. Termination for Convenience

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

b. Termination for Cause

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

c. Non-Appropriation:

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

39. 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

40. 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.

41. Applicable Laws

This Agreement sha1l be governed by and construed in accordance with the laws of the State of South Carolina, U.S.A.

42. 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.

43. 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.

44. Notice of Award

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

45. 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.

46. 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.

47. Firm Pricing for County Acceptance
Bid price must be firm for County acceptance for 90 days from bid opening date.

48. Use of Brand Names (If Appropriate)
(not used)

49. 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 effecting such requested changes.

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. Permits
The successful Offeror must be responsible for obtaining all necessary city, county, and state permits/licenses and must comply with all local codes and ordinances. Copies of such permits/licenses shall be made available to the County upon request. Building contractors working within Georgetown County must also secure a Contractor's License from the Building Department. Work within the Georgetown City Limits may require a City Business License.

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.gtcounty.org. Select "Purchasing", then "Bids Information" 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. 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.

56. 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.

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

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. 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 be mailed or faxed to all Bidders. Copies of Addenda will be made available for inspection at the office of the County Purchasing Officer. 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.

60. Liquidated Damages

Refer to *The Project Manual, Vol. 1, Division 1, Section 01100, Summary of Work.*

~~61. Testing Laboratory Services~~

(not used)

~~62. Allowances~~

(not used)

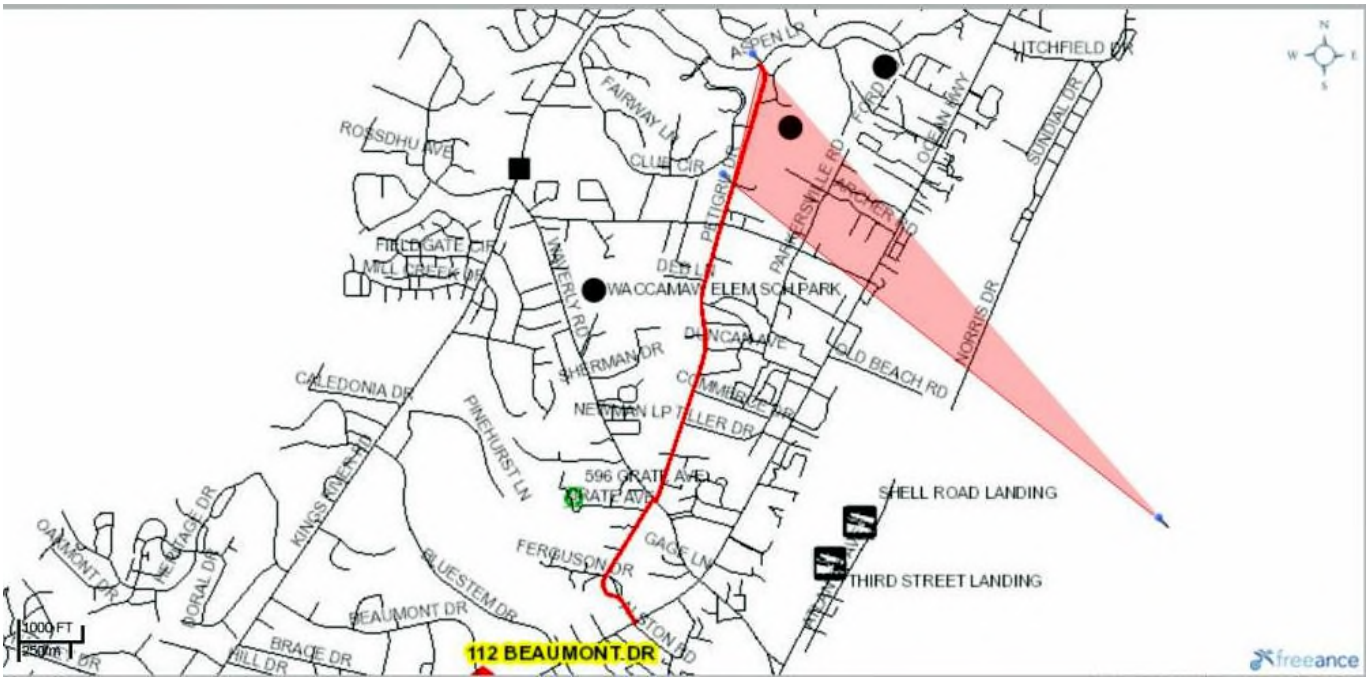
63. The contractor will be responsible for disposal of any and all removed, unused and surplus materials and any fees and transportation costs associated with the disposal.

64. 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.

END OF SECTION 00100

SECTION 00200 – Project Location

Petigru Drive	Length (Miles)	Segment Description:
	0.523	STA 20+37.66 to Aspen Loop
Between Martin Luther King Road and Aspen Loop in the Pawleys Island community.		



Project Location and Limits of Construction

Location Aerial

SECTION 00300
BID FORM
MANDATORY BID SUBMITTAL FORM

FIRM NAME: _____

For: **BID #18-005, Petigru Drive Comprehensive Engineered Roadway Improvements**

To: **MAILING ADDRESS:**
County of Georgetown
Post Office Drawer 421270
Georgetown SC 29442-1270
Attn: Purchasing

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

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

   Petigru Drive:

   _____ $ _____
   (words shall govern)

2) 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 not exceed 10% total for overhead and profit on work performed by the Contractor's own forces and shall not exceed 15% total on work by Subcontractors.

3) COMPLETION DATE: Contractor must conform to Division 0, Section 00750, Summary Schedule and Key Milestones.

4) LIQUIDATED DAMAGES: Liquidated damages for this project shall be $200.00 per calendar day for Contractor's failure to complete any key milestone by its intermediate completion date or the Substantial Completion date. Refer to Division 1, Section 01100, Summary of Work.

5) 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.

6) The undersigned, when notified of the acceptance of this Bid proposal, does hereby agree to enter into a Contract with the Owner within five (5) calendar days from the date of the Notice of Award, for the execution of the work

described within the period of time allocated, and he / she shall give a Performance Bond and Payment Bond, with good and sufficient surety.

7) 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.

8) 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.

9) 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.

10) The undersigned attaches hereto a cashier's check, certified check or Bid Bond in the sum five per-cent (5%) of the total base bid payable to Georgetown County, as required in the Request for Proposals, and the undersigned agrees that in case he / she fails within five (5) calendar days after Notice of Award of the Contract to him /her to enter into the Contract in writing and furnish the required Payment and Performance Bonds, with surety or sureties to be approved by Owner, and insurance policies or endorsements, the Owner may, as its option, determine that the undersigned has abandoned his / her rights and interest in such Bid and that the cashier's check, certified check, or Bid Bond accompanying his 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.

11) 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.

12) 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.

13) 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.

14) 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.

15) The undersigned affirms that wages not less that 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".

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

Exhibit A: Acknowledgement of Addenda
Exhibit B: Notice of Intent to Respond
Exhibit C: Non-Collusion Affidavit
Exhibit D: Substitute IRS Form W-9
Exhibit E: Indemnification
Exhibit F List of Prime and Sub-Contractors
Exhibit G: Statement of Experience
Exhibit H: Unit Price Schedule
Exhibit I: Local Resident Vendor Certification
Exhibit J: Exceptions Page Form
Exhibit K: CADD Release Form

17) SC GC LLR License Number and Endorsements:_____

18) Project Mgr/NTP Contact Address:_____

_____

19) Project Mgr/NTP Contact Person: _____

20) Telephone Number _____ Fax Number _____

21) E-Mail address _____

22) Remittance Address: _____

_____

23) A/P Accounting Contact _____

24) Telephone Number _____Fax Number _____

25) E-Mail address _____

26) 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 Nonprocurement suspension and debarment. [See https://www.epls.gov/ for additional information.]

27) SCLLR Contractor's License No. and Endorsements: _____

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

☐ **Yes** ☐ **No**

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

30) 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**

31) 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.

32) The lowest or any proposal will not necessarily be accepted and the County reserves the right to award any portion thereof. I/We, the undersigned, hereby confirm that all the above noted documents for Bid/Request for Proposal No. 18-005 were received.

33) Printed Name of person binding bid _____

34) Signature (X)_____

35) Date_____

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

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

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION:

State of: (_____)

Country of: (_____)SS

On this _____ day of _____, 20_____, before me personally came and appeared _____to me Known, who, being by me duly sworn, did depose and say to me that he resides at _____, that he/she is the _____ of _____ the corporation described in and which executed the foregoing instrument is an impression of such seal; that it was so affixed by the order of the directors of said corporation, and that he signed his name thereto by like order.

(Seal) _____
Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP:

State of (_____)

Country of (_____)

On this _____day of _____ 20_____, before me personally came and appeared _____ to me known and known to me to described in and who executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal) _____
Notary Public

ACKNOWLEDMENT OF PRINCIPAL, IF AN INDIVIDUAL:

State of (_____)

Country of (_____)

On this _____day of _____ 20_____, before me personally came and appeared _____ to me known and known to me to be the person described in and who executed the forgoing instrument and acknowledged that he executed the same.

(Seal) _____
Notary Public

(Exhibits Continue on Following Pages)

EXHIBIT A

BID #18-005
Petigru Drive Comprehensive Engineered Roadway Improvements

ADDENDA ACKNOWLEDGEMENT

Mandatory Bid 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:_____

Company Name: _____

Authorized Signature: (X)_____

Printed Name: _____

[THE REMAINDER OF THIS PAGE IS BLANK]

EXHIBIT B

Intent to Respond

REF: #18-005, Petigru Drive Comprehensive Engineered Roadway Improvements

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 "purchasing" and "current bids".

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

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

Company Name: _____

Address: _____

_____

Contact Person: _____

Telephone: _____

FAX: _____

E-Mail: _____

Please return this completed form to Kyle Prufer, Purchasing Officer:

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

[End of Intent to Respond]

EXHIBIT C

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

State of South Carolina)
County of Georgetown)

Being first duly sworn deposes and says that:

(1) (S)he is_____ of_____
The Bidder / Proposer that has submitted the attached Bid / Proposal;

(2) He / She is fully informed respecting the preparation and contents of the attached Bid / Proposal and of all pertinent circumstances respecting such Bid / Proposal;

(3) Such Bid / Proposal is genuine and is not a collusive or sham Bid / Proposal;

(4) Neither the said Bidder / Proposer nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder / Proposer, firm or person to submit a collusive or sham Bid / Proposal in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder / Proposer, firm or person to fix the price or prices in the attached Bid / Proposal or of any other Bidder / Proposer, or to fix any overhead, profit or cost element of the Bid / Proposal price or the Bid / Proposal price of any other Bidder / Proposer, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid / Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder / Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed)_____

_____
(Title)

Subscribed and sworn to before me this_____day of_____, 2018
Notary Public in and for Georgetown County, South Carolina
My commission expires on:_____

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

EXHIBIT D
SUBSTITUTE FOR FORM W-9
MANDATORY BID SUBMISSION FORM

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

INDIVIDUAL OR OWNER'S NAME _____
(Sole Proprietor Must Provide Individual Name along with Business Name)

LEGAL BUSINESS NAME (d/b/a): _____

ADDRESS: (_____
(_____
(_____

9 DIGIT TAXPAYER IDENTIFICATION NUMBER (TIN)
(Individual Must Provide SS#; Sole Proprietorship may provide SS# or EIN#)

Social Security Number ___ ___ ___ - ___ ___ - ___ ___ ___ ___

Employer Identification Number ___ ___ - ___ ___ ___ ___ ___ ___ ___

BUSINESS DESIGNATION

☐ Individual, Sole Proprietor, or Single-Member LLC ☐ C-Corporation

☐ S-Corporation ☐ Partnership

☐ Trust/Estate ☐ Governmental Entity

☐ Non-Profit Organization/501(a) ☐ Other:_____

☐ Limited Liability Company: C = Corporation S = S Corporation P = Partnership
(Must Circle the appropriate Tax Classification

Exempt Payee Code (if any): _____
(Exemption codes apply only to certain entities, not individuals; IRS W-9 instructions, page 3):

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

☐ MEDICAL SERVICES PROVIDER ☐ ATTORNEY/LEGAL SERVICES PROVIDER

CERTIFICATION Under penalties of perjury, I certify that:
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; 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. *The Internal Revenue Service does not require your consent to any provision of this document other than the certifications required to avoid back-up withholding.*

Signature: _____ Date_____

EXHIBIT E

INDEMNIFICATION
(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.:_____

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

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 OF THE BIDDER / PROPOSER
(Mandatory Bid Submittal Form)

The Bidder / Proposer 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.

Project and Location	Reference
1) _____	_____
_____	_____
2) _____	_____
_____	_____
3) _____	_____
_____	_____
4) _____	_____
_____	_____
5) _____	_____
_____	_____
6) _____	_____
_____	_____

Dated:_____ Bidder / Proposer:_____

Signed:_____

Title:_____

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

EXHIBIT H - UNIT PRICE SCHEDULE
COMPREHENSIVE ENGINEERED ROADWAY IMPROVEMENTS
DUE UPON REQUEST FROM OWNER PRIOR TO CONTRACT
NOT REQUIRED TO BE SUBMITTED WITH YOUR OFFER

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 and all other associated costs for the finished and completed Work. All Unit Prices for work added to the contract shall be measured and paid for as described in all SCDOT references from project Special Provision #2. The schedule of values from the line items below will also be used for establishing partial payments based on a quantity agreed upon by both the Contractor and the County.

THESE QUANTITIES ARE ESTIMATED FOR USE OF LUMP SUM BID. CONTRACTOR TO VERIFY QUANTITIES.					
ITEM NO.	**DESCRIPTION**	**U/M**	**QTY**	**UNIT PRICE**	**TOTAL PRICE**
1031000	MOBILIZATION	LS	NEC		
1050800	CONSTRUCTION STAKES, LINES & GRADES	EA	1		
1071000	TRAFFIC CONTROL	LS	NEC		
1090200	AS-BUILT CONSTRUCTION PLANS	LS	1		
2011000	CLEARING & GRUBBING WITHIN RIGHT OF WAY	LS	NEC		
2031000	UNCLASSIFIED EXCAVATION	CY	2633.00		
2033000	BORROW EXCAVATION	CY	1531.00		
2081001	FINE GRADING	LS	NEC		
3050106	GRADED AGGREGATE BASE COURSE (6" UNIFORM)	SY	9100.00		
3069900	MAINTENANCE STONE	TON	100.00		
3100320	HOT MIX ASPHALT BASE COURSE - TYPE B	TON	75.00		
4010005	PRIME COAT	GAL	1365.00		
4011004	LIQUID ASPHALT BINDER PG64-22	TON	110.00		
4020330	HOT MIX ASPHALT INTERMEDIATE COURSE TYPE C	TON	890.00		
4030340	HOT MIX ASPHALT SURFACE COURSE TYPE C	TON	1040.00		
4037100	HOT MIX ASPHALT CONCRETE PLANT MIX UNDER GUARDRAIL	SY	150.00		
6051100	PERMANENT YELLOW PAVEMENT MARKERS BI-DIR.-4"X4"	EA	70.00		
6051120	PERMANENT CONSTRUCTION SIGNS (GROUND MOUNTED)	SF	252.00		
6250010	4" WHITE SOLID LINES (PVT. EDGE LINES)-FAST DRY PAINT	LF	11052.00		
6250015	8"WHITE SOLID LINES (CROSSWALK&CHANNELIZATION)FAST DRY PAINT	LF	564.00		
6250025	24" WHITE SOLID LINES (STOP/DIAGONAL LINES)-FAST DRY PAINT	LF	202.00		
6250110	4"YELLOW SOLID LINE(PVT.EDGE&NO PASSING ZONE)-FAST DRY PAINT	LF	10430.00		
6271010	4" WHITE SOLID LINES (PVT. EDGE LINES) THERMO.- 90 MIL.	LF	5526.00		

ITEM NO.	DESCRIPTION	U/M	QTY	UNIT PRICE	TOTAL PRICE
6271015	8" WHITE SOLID LINES THERMOPLASTIC - 125 MIL.	LF	282.00		
6271025	24" WHITE SOLID LINES (STOP/DIAG LINES)-THERMO.-125 MIL	LF	101.00		
6271074	4" YELLOW SOLID LINES(PVT.EDGE LINES) THERMO-90 MIL.	LF	5215.00		
6510105	FLAT SHEET, TYPE III, FIXED SZ. & MSG. SIGN	SF	89.00		
6531210	U-SECTION POST FOR SIGN SUPPORTS - 3P	LF	192.00		
7141112	15" RC PIPE CUL.-CLASS III	LF	326.00		
7141113	18" RC PIPE CUL.-CLASS III	LF	174.00		
7141114	24" RC PIPE CUL.-CLASS III	LF	80.00		
7191605	CATCH BASIN -TYPE 16	EA	4.00		
7192020	DROP INLET (24" X 36")	EA	2.00		
7201100	CONCRETE CURB (TRANSITION)	LF	60.00		
7203110	CONCRETE CURB AND GUTTER(1'-6") VERTICAL FACE	LF	50.00		
7203210	CONCRETE CURB AND GUTTER(2'-0") VERTICAL FACE	LF	1231.00		
8080000	MOVING ITEMS, FENCES, ETC…	LS	NEC		
8041020	RIP-RAP (CLASS B)	TON	96.00		
8048215	GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP(CLASS 2)TYPE D	SY	144.00		
8051208	GUARDRAIL THRIE-BEAM WITH BASE PLATE 3.125' POST SPACING	LF	25.00		
8100001	PERMANENT VEGETATION	MSY	18.00		
8103100	TEMPORARY VEGETATION	MSY	18.00		
8051155	MT2 LEADING END TREATMENT TL2	EA	5.00		
8051710	MB TRAILING END TREATMENT	EA	1.00		
8051205	GUARDRAIL W-BEAM WITH BASE PLATE 6.25' POST SPACING	LF	500.00		
8151110	TEMPORARY EROSION CONTROL BLANKET (ECB)	MSY	9.00		
8151203	HYDRAULIC EROSION CONTROL PRODUCT (HECP) - TYPE 3	ACRE	7.44		
8152007	SEDIMENT TUBES FOR DITCH CHECKS	LF	203.00		
8153000	SILT FENCE	LF	1930.00		
S000001	6' SHADOWBOX DOG EAR FENCE	LF	1490.00		
S000002	GATE FOR 6' SHADOWBOX DOG EAR FENCE	EA	2.00		
S000003	CONCRETE UNDER GUARDRAIL (4" UNIFORM)	SY	160.00		

Sub-total for Petigru Drive	

Additional Quantities not included in the lump sum base bid. Contractor must contact the County prior to performing muck excavation if additional payment is to be requested. See Special Provisions for details.

ITEM NO.	DESCRIPTION	U/M	QTY	UNIT PRICE	TOTAL PRICE
2034000	MUCK EXCAVATION	CY	1000.00		

Total for Petigru Drive	

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

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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. If none, write "NONE".

END OF SECTION 00300

SECTION 00400

BID BOND

(Submit in duplicate – one (1) original and one (1) copy. Attach copies of Power of Attorney and Agent's Current South Carolina license

STATE OF _____)
SS
COUNTY OF_____)

KNOW ALL MEN BY THESE PRESENTS 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 _____, 2018 entered into a

certain Contract with the Owner, hereto attached, for Contract entitled

#18-005, User Fee Comprehensive Engineered Roadway Improvements: FY17

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 _____, 2018.

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

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

WITNESSETH:

WHEREAS, the Owner has a project entitled **18-005, Petigru Drive Comprehensive Engineered Roadway Improvements** hereinafter referred to as the "Project", and;

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

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

1. The Contractor, for and in consideration of the payments hereinafter specified and agreed to be made by the Owner, hereby covenants and agrees to furnish and deliver all materials required, to do and perform all the work and labor, in a satisfactory and workmanlike manner, required to complete the Project within the time specified, in strict and entire conformity with the Construction Contract Documents, on file at the Office of the Purchasing Dept., Georgetown County, which are duly approved by the Owner and which said Project Manual, Drawings, Technical Specifications and other Contract Documents are hereby made part of this Contract as fully and with the same effects as if the same had been set forth at length in the body of this Contract.

Sample

2. The Contractor hereby agrees to indemnify, defend and hold the Owner and its agents, representatives and employees harmless from any and all liabilities, losses, damages, penalties, judgments, awards, claims, demands, costs, expenses, including reasonable attorney's fees and court costs, actions, lawsuits or other proceedings arising directly or indirectly, in whole or in part, out of the negligence or willful acts or omissions of the Contractor, its prime contractor, trade subcontractors and consultants or their respective agents, directors, officers or employees in connection with this Contract or in any way with the services or Work described herein, any occurrence at the Project site, or any occurrence arising in connection with or at the Project site or in connection with the Work, whether within or beyond the scope of its duties hereunder.

3. The Contractor's indemnity and defense obligations under this Contract shall be absolute notwithstanding any provision contained herein or elsewhere to the contrary, and shall survive Final Completion and Final Payment for a period equal to the statute of limitations for any action which could be brought against the Owner or its agents, officers, directors and employees and shall continue through the duration of any action brought during the applicable time periods.

4. Contractor agrees to indemnify, defend and hold the Owner and its agents, representatives, officers, directors and employees harmless from all costs, damages and expenses, including reasonable attorneys fees, incurred by the Owner and its consultants by virtue of any claim or claims filed by any trade prime or subcontractor, mechanic, laborer, or 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 prime or subcontractors. The Contractor also hereby agrees to indemnify and hold harmless, protect and defend the Owner and its consultants from and against any liability, claim, judgment, loss or damage, including, but not limited, to direct damages, attorney's fees, court costs and expenses of collection, occasioned in whole or in part by

the sole failure of the Contractor, and its trade prime or subcontractors to comply with any of the terms or provisions of this Contract.

5. In any and all claims against the Owner by any employee of the Contractor or trade prime or subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 2 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any trade prime or subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

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

Sample

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

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

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

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

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

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

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

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

15.Contractor represents and warrants unto Owner that no officer, employee or agent of Owner has any interest, either directly or indirectly, in the business of the Contractor to be conducted hereunder. Contractor further

represents and warrants to Owner that it has not employed or retained any company person, other than a bona fide employee working solely for Contractor, to solicit or secure this Contract, that it has not paid or agreed to any person, company, corporation, individual or firm, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Contract, and that it has not agreed, as an express or implied condition for obtaining this Contract, to employ or retain the services of any firm or person in connection with carrying out this Contract. Contractor assures that it will insert the above provision in each of its prime and subcontractor and consultant's agreements relating to the services to be performed hereunder.

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

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

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

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

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 as may have been accumulated in performed this Contract, whether completed or in process, delivered to the Owner.

b) Contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.

c) If the termination is due to failure to fulfill the Contractor's obligations, the Owner may take over the work and prosecute the same to completion by contract or otherwise. In such case, the Contractor shall be liable to the Owner for any additional cost occasioned to the Owner thereby.

d) If, after notice of termination for failure to fulfill its Contract obligations, it is determined that the Contractor had not failed, the termination shall be deemed to have been effected for the convenience of the Owner. In such event, adjustment in the Contract price shall be made as provided in paragraph 21.a of this clause.

e) The rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract.

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

Georgetown County

_____ By:_____

Witness:

Title:_____

Sample

Contractor

_____ By: _____

Witness:

Title:_____

(SEAL)

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 _____, 2018 entered into a certain Contract with the Owner, included herein, for the Contract entitled **Petigru Drive Comprehensive Engineered Roadway Improvements** in Georgetown County, South Carolina.

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

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

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

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

In the case of termination of the Contract, as provided in the 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 _____, 2018.

PRINCIPAL

_____
(Firm Name)

_____By: _____
WITNESS (Title)

SURETY

_____
(Firm Name)

_____ By: _____ WITNESS
(Title)

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 _____ Dollars ($_____) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally firmly by these presents.

WHEREAS, the Principal, on the _____ day of _____, 2018 entered into a certain Contract with the Owner, included herein, for Contract entitled **#18-005, Petigru Drive Comprehensive Engineered Roadway Improvements.**

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

1. This bond is executed for the purpose of complying with the applicable State of South Carolina Statutes and all acts amendatory thereof, and this Bond shall inure to the benefit of any and all persons supplying labor, material and supplies used directly or indirectly by the Principal or his Subcontractors in the prosecution of the work provided for in said Contract so as to give such persons a right of action to recover upon this Bond in a separate suit brought on this Bond. No right of action shall accrue hereunder to or for the use of any person except as such right of action may be given and limited by the applicable State of South Carolina Statutes.

2. In each and every suit brought against the Principal and Surety upon this Bond in which the plaintiff shall be successful, there shall be assessed therein against the Principal and Surety herein, in favor of the Plaintiff therein, reasonable counsel fees, which the Principal and Surety hereby expressly agree to pay as a part of the cost and expense of said suit.

3. A claimant, except a laborer, who is not in privity with the Principal and who has not received payment for his labor, materials, or supplies, shall, within forty-five (45) calendar days after beginning to furnish labor, materials, or supplies for the prosecution of the work, furnish the Principal with a notice that he intends to look to the bond for protection.

4. A claimant who is not in privity with the Principal and who has not received payment for his labor, materials or supplies shall, within ninety (90) calendar days after performance of the labor or after complete delivery of the materials or supplies, deliver to the Principal and to the Surety written notice of the performance of the labor or delivery of the materials or supplies and of the non-payment.

5. No action for the labor, materials, or supplies may be instituted against the Principal or the Surety unless both notices have been given. No action shall be instituted against the Principal or the Surety on the bond after one (1) year from the performance of the labor or completion of delivery of the materials or supplies.

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

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

PRINCIPAL

_____

(Firm Name)

_____ By: _____

(Witness) (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 designing and constructing the project. The activities to be shown on the schedules will be monitored and updated.
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 the Base Bid are as follows:

Milestone: Final Completion Date: 240 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 **Petigru Drive Comprehensive Engineered Roadway Improvements** project and required by the Contract Documents. They are intended to supplement those contractual requirements contained within the 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 only entrances to the Project site shall be by a gate or gates or such other location designated by the Owner. This will be determined during the pre-construction meeting. The Contractor shall be responsible for gate security. 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 control and safety of vehicles traversing to and from Martin Luther King Drive and Aspen Loop.

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

2.0.3 OPEN TRENCHES

All open trenches and excavations within the project site shall be marked per the requirements of MUCTD and any referenced Standard Drawings for Traffic Control.

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/her 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.

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 technical specifications for permitting and are in conformance with the Construction Documents. 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 adjacent to or on the project site over which his, 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~~

(not used)

6.0 PROJECT PROGRESS PHOTOGRAPHS

The Contractor shall furnish to the Owner progress photographs that shall be taken monthly for the duration of the Work of this Contract. The photographs shall be taken before the start of construction work and continuing throughout the work as it progresses and as long as the work of this Contract is being performed. Refer to Division 1, Section 01322, Photographic Documentation. A photograph shall be taken from each corner of the construction limit lines of this Contract looking towards the center of the Project site.

PART 2- PRODUCTS

Not Used

PART 3- EXECUTION

Not Used

END OF SECTION 00800

SECTION 00900

LIST OF DRAWINGS & TECHNICAL SPECIFICATIONS
(Beginning on Page 73)
18-005, Petigru Drive Comprehensive Engineered Roadway Improvements

I - LIST OF DRAWINGS:

Perigru Drive 04/16/2018

Sheet No.	Description	Number of Sheets
01	Title Sheet	1
03 – 03B	Typical	3
05	General Construction Notes	1
05A	Reference Sheet	1
06 – 11	Plan and Profile Sheets	6
PM1 – PM3	Pavement Marking Sheets	3
EC01	Erosion Control Sheet	1
X1 – X22	Cross Sections	22
D01 – D08	Detail Sheets	7
	TOTAL SHEETS	45

Plans and Drawings should be plotted to 22”x36” to maintain scale.

END OF SECTION 00900

SECTION 01100
SUMMARY OF WORK

PART 1-GENERAL

The Summary of Work in this Section comprises the **Petigru Drive Comprehensive Engineered Roadway Improvements** project in 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 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. The Drawings and Technical Specifications are not intended to indicate or describe all work, or means and method of construction required for completion of the Work. The Contractor shall provide and install all incidentals that are required for completion of the Work.

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 AND USE OF THE PREMISES

A. Contractor shall have use of 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 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. Construction services shall be performed by qualified, licensed construction contractors and suppliers selected and paid by the Contractor.
D. Contractor shall provide protection at all affected areas of the site during the performance of the Work.
E. Contractor shall perform all work in conformance with O.S.H.A. requirements, which will be strictly enforced.
F. Contractor shall coordinate the use of the premises consistent with the Project requirements as may be directed by the Owner.
G. 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.
H. Electrical power will not be provided for welding or any other equipment.
I. 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.
J. 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.
K. 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.

1.03 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.

1.04 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 Substantial Completion date then the Contractor shall pay to the Owner Liquidated Damages as specified in *The Project Manual, Vol. 1, Division 1, Section 01100, Summary of Work*, 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 Substantial 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.

1.05 SUBSTITUTIONS AND PRODUCT OPTIONS

Refer to Division I, Section 01600, Product Requirements in the Project Manual.

1.06 SURVEY

Contractor shall verify all survey data, Geotechnical reports and Dilatometer 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

SECTION 01230

ALTERNATES

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

A. This Section identifies each Alternate by number and describes the basic changes to be incorporated into the Work, only when that Alternate is made part of the Work by specific provisions in the Contract Agreement. Administrative and procedural requirements governing Alternates is included

1.02 RELATED REQUIREMENTS

A. An Alternate is an amount proposed by Bidders and stated on the Bid Form for certain work defined in the Bidding and Contract Documents that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in products, materials, equipment, systems or installation methods described in the Contract Documents.

B. The Contract shall incorporate Alternates accepted, in writing, by the Owner.

C. Sections of the Technical Specifications as may be referred to and listed under the respective Alternates.

D. Referenced Sections of the Technical Specifications stipulate pertinent requirements for products and methods to achieve the Work stipulated under each Alternate.

E. Coordinate pertinent related work and modify surrounding work as required to properly integrate work under each Alternate, and to provide the complete construction work required by the Contract Documents.

F. Each Alternate shall be quoted giving a date on which the Alternate must be accepted so as to have no affect on the Contract amount and schedule..

G. Division 1, General Requirements, in the Project Manual governs the execution of all Technical Specification Sections.

~~1.03 ALTERNATES~~
(not used)

~~1.04 DESCRIPTION OF ALTERNATES~~
(not used)

PART 2 – PRODUCTS
Not Used

PART 3 – EXECUTION
Not Used

END OF SECTION 01230

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 Certified Applications for Payment.
B. This Section requires the coordination of the Contractor's Applications for Payment with the Construction Schedule, including established Key-Milestone Dates, Schedule of Values, Submittal Schedule, Prime and Sub-Contractors work.

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 Certified Application for Payment will be processed, by the Owner, thirty (30) calendar days from the day that the Contractor submits the final Application 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 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 Certified 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 for Payment will be returned without action.

10. Conditions governing regular schedule for applications, payment and 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

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. Schedule of principal products and long lead delivery items, to be updated monthly.
f. Submittal Schedule, Procurement Schedule.
g. Copies of all required permits.
h. Copies of authorizations and licenses from governing authorities for performance of work.
i. Initial progress report.
j. Certificates of Insurance and insurance policies.
k. 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.
l. 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. Testing, adjusting and balance records.
d. Maintenance manuals, training and instructions.
e. Equipment start-up performance reports.
f. Changeover information related to Owner's occupancy, use, operation and maintenance.
g. Final cleaning of the entire project site..
h. Application for Reduction of Retainage, and Consent of Surety.
i. 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 (PDF) 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

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 Contract Documents as minimum standards. Nothing contained in the Contract Documents shall be so construed as to be in conflict with any law, bylaw or regulation of the municipal, state, federal or other authorities having jurisdiction.

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 Natural Resources (SCDNR)
3. South Carolina Dept. of Transportation (SCDOT)
4. South Carolina Department of Health Environmental Controls (SCDHEC)
5. OSHA Code of Federal Regulations. (OSHA)
6. 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.
7. 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, 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 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 Georgetown 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 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

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. The Contractor shall be responsible for general project coordination of all construction phases and aspects, trades and disciplines of the Work of the Project.

C. The Contractor shall be responsible for general coordination of all construction site operations with other improvement projects that may be conducted by the Owner.

D. The Contractor shall be responsible for general coordination with other interested parties including, but not limited to, Davis & Floyd, Incorporated, Owner, other Contractors working on Owner or abutter property projects, and all involved permitting authorities.

1.02 RELATED REQUIREMENTS

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

1.03 GENERAL COORDINATION

A. Coordinate scheduling, submittals, and work of various Sections of the Technical Specifications to assure efficient and orderly sequence of installation of construction elements with provisions for accommodating 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), outlining 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 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.

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 as may be applicable.

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 Drawings and/or contained in the Technical Specifications. Utilize space efficiently to maximize accessibility for Owner installations, maintenance and repairs.

B. In finished areas, except as otherwise shown, conceal ducts, pipes, wiring, and other non-finish items within construction. Coordinate locations of concealed items with finish elements, and provide as-constructed drawings of the involved location.

C. 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.

D. 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.

1.06 COORDINATION OF MECHANICAL, ELECTRICAL, AND OTHER INSTALLATIONS

A. General: Sequence, coordinate, and integrate the various elements of mechanical, electrical, and other systems, materials, and equipment. Comply with the following requirements:

1. Coordinate mechanical and electrical systems, equipment and materials installation with other building components.

2. Verify all dimensions by field measurements, and advise the Owner of any dimensional conflicts.

3. Arrange and coordinate for chases, slots, and openings in other building components during progress of construction.

4. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, prior to placement of concrete and/or other structural components.

5. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible and advise the Owner prior to completion of such installations.

6. Coordinate connection of systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchise service (utility) companies, and controlling agencies. Coordinate and provide required connection for each service.

7. Install systems, materials, and equipment to confirm with approved submittal data, include coordination drawings. Confirm to arrangements indicated by the Contract Documents, recognizing that portions of the Work may be shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, immediately refer conflict to the Owner

8. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components. Elements restricting such installation will be referred to the Owner

9. Install systems, materials, and equipment to facilitate servicing, maintenance, and repair or replacement of disconnecting, with minimum of interference with other locations and ease of access.

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 apply to this Section.
B. Division 1, General Requirements of the Contract Documents apply to this Section.

1.2 SUMMARY

. This Section specifies administrative and procedural requirements for all project meetings including but not limited to the following:

1. Field / Site Coordination Meetings.
2. Construction Progress Meetings.
3. Project Coordination / Information Response Meetings (By Owner)

1.3 PROGRESS MEETINGS

A. Conduct Field / Site Work Coordination meetings at a location and at appropriate times to be determined by the Owner. Notify the Owner no less than 48 hours prior to scheduled meeting date.

Conduct Construction Progress meetings at the Project site, or at such location designated by the Owner at regularly scheduled intervals. At the onset of the project these meeting shall be held on a weekly basis until such time as the frequency is changed by the Owner. Notify the Owner of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

Conduct Project Coordination / Information Response Meetings at such times as may be required and at a location to be approved by the Owner. Notify the Owner no less than 48 hours prior to scheduled meeting date.

B. Agenda: Agendas and minutes for Field and Project Coordination meetings will be prepared by whoever (Contractor or Owner) requests the meeting. Agenda for regularly scheduled Construction Progress Meetings will be prepared by the Owner; minutes of those meetings will be prepared by the Contractor.. Review and provide comment on minutes of the previous (Field/Site Coordination, Progress or Project Coordination meetings. 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 construction progress schedule, whether on time or ahead or behind schedule. Determine how schedule can be improved if behind.

C. Reporting: After each Construction Progress meeting date the Contractor will prepare and forward to the Owner, minutes of the meeting for review and comment. The Owner will distribute (corrected) copies of minutes of the meeting to each party present and to other parties who should have been present. Contractor shall include a brief summary, in narrative form, of progress since the previous meeting and report.

1. Schedule Updating: Contractor will revise / update the construction schedule after each Construction Progress Meeting where revisions to the schedule have been made or recognized. Contractor will Issue the revised schedule, to the Owner, concurrently with the report / minutes of each meeting.

PART 2 – PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01315

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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 SCHEDULING PERSONNEL

Not Included (NIC)

1.04 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.

1.05 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. 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. Indicate changes from the previous report with an asterisk.
E. 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.
6. Hot Laid Asphalt and Portland Cement Concrete Pour Schedules: To be submitted no less than five (5) calendar days prior to the date scheduled for the activity.

1.06 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.

1.07 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.

1.08 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.

1.09 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.

1.10 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 User Fee 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.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION 01320

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 .jpg file of each view to Owner via weekly e-mails until project is complete and signed off on by Georgetown County Public Works.

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.

PART 2 – PRODUCTS

2.01 PRINTS

A. Finish: Color, single weight, smooth surface, glossy.

B. Size: 8” x 10”, standard size.

C. Bindings: Display each 8” x 10” print in a three (3) ring binder clear acrylic holder.

D. Identify each print on back, listing time and date of exposure, location and orientation of view, Project name and address of photographer, and photographer’s numbered identification of exposure.

E. Polaroid or instant camera prints are not acceptable. Photographs shall be taken with 35mm equipment as a minimum.

2.02 NEGATIVES

A. Negatives will become the property of Owner with sole rights of reproduction.

PART 3 – EXECUTION

3.01 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.

3.02 DELIVERY OF PRINTS

A. Contractor to e-mail .jpg progress photo files to Owner on a weekly basis.

END OF SECTION 01322

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'' 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 RFP / 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 and 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.

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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 for the purpose of monitoring the progress of the work and administration of the Application for Payment Process with their response (Bid) to the RFP.
B. Provide Owner, after receipt of the Notice to Proceed (NTP) and upon request by the Owner, including support values and data substantiating their accuracy and correctness.
C. Division 0, Bidding and Contract Documents in the Project Manual.
D. Division 1, General Requirements in the Project Manual.

1.02 FORM AND CONTENT

A. The Schedule of Values shall be tabulated to correspond with the Contractor's Application for Payment form, and shall be identified with:

1. Title of Project, Location and Owner RFP or Bid Number.
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, such as:
   a. Bonds
   b. Insurance
   c. Temporary facilities, services and controls.
   d. Field supervision and layout
   e. Testing
6. Separate material cost and labor cost as 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 must 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, the Contractor may be requested to revise and resubmit Schedule of Values as may be determined appropriate by the Owner.

B. Revised and approved Schedule of Values 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 dependent 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

(Not Used)

END OF SECTION 01410

SECTION 01500

TEMPORARY FACILITIES AND UTILITIES

(Not Used)

END OF SECTION 01500

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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 all temporary controls 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.

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 for 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 the 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 the completion of the Work, or as required by execution of the Work or as may be directed by the Owner..

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 PERIMETER SIGNAGE (NIC)

2.05 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 01550

ACCESS ROADS AND PARKING AREAS

PART 1 – GENERAL

1.01 REQUIREMENT INCLUDED

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. Access to and egress from the Project Site will be gained only via routes and through gates as shown on the Plans and approved by Owner. Equipment weight and height limits will be strictly enforced. Contractor is responsible for providing access roads capable of supporting construction traffic. Contractor and trade contractors of all tiers shall be responsible to comply with these requirements.

C. Install barriers and necessary traffic controls at start of construction to protect public and leave in place throughout construction. Remove at end of construction.

D. Contractor is responsible for assessing risk to public and providing lights, flagmen, traffic signals, stop signs or other necessary controls, as needed and approved by the Owner and / or the South Carolina Dept. of Transportation (SCDOT).

E. Contractor shall be responsible to repair all damage to off-site street, roads, curbs along haul routes and any existing site elements damaged by construction related traffic.

1.02 RELATED WORK

A. NIC

1.03 REGULATORY AGENCIES

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

PART 2 – PRODUCTS

2.01 GENERAL

A. If repair to public or private roadways is necessary due to damage by construction traffic, materials and methods used for repairs are to be acceptable to the applicable jurisdictional authority and are to match existing conditions. Contractor shall perform such work at his/her sole cost and expense.

B. Provide warning signs to help prevent damage and injury and to promote safety..

C. Should it become necessary to remove safety items, it shall be Contractor's responsibility to replace them immediately, in conformance with applicable regulations. Contractor shall perform such work at his/her sole cost and expense.

2.02 PARKING

A. Contractor's vehicles and employee parking shall be confined to an area identified within the site limits and as directed by the Owner.

2.03 STAGING

A. Contractor shall confine materials, products, equipment and temporary facilities within site limits and as directed by the Owner.

PART 3 – EXECUTION

3.01 REMOVAL

A. Temporary construction access roads, drives, walks, and parking areas shall be removed at completion of Work or as required by execution of Work at the Contractor's sole cost and expense.

B. Areas shall be returned to original condition unless otherwise required by the Owner.

END OF SECTION 01550

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SECTION 01563

HANDLING OF INCIDENTAL FUEL SPILLAGE DURING CONSTRUCTION

PART 1 – GENERAL

1.01 RELATED REQUIUREMENTS

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)

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, is 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, soils and environment 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)
RFP / Bid 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. The Contractor shall comply with and be responsible for traffic control planning and implementation as may be directed and approved by SCDOT and the Owner.

D. 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 may be required by the SCDOT 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 designated. in the Construction Contract Documents. Prior to closing any access way and/or structure coordinate Work schedule with the Owner and the SCDOT if applicable..

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 and / or the SCDOT if applicable..

1.04 HAUL ROUTES

A. Based on regulations prescribed by the South Carolina Dept. Transportation (SCDOT), Georgetown County or any other agency having jurisdiction, use only established roadways or use temporary roadways constructed by Contractor when and as authorized by the Owner. When materials are 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, and shall repair or pay for repair of all damaged curbs, sidewalks, roads and/or paving.

1.05 TRAFFIC SIGNS AND SIGNALS

A. At approaches to site and on-site, install signs or signals at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public vehicular and pedestrian traffic. This should be included in the Conty6ractor's approved Traffic Control Plan.

B. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.

C. Relocate traffic control signs and signals as Work progresses, to maintain safe and effective traffic control.

D. Coordinate with construction signs described in Section 01580, Project Identification and Signs.

1.06 FLAGMEN

A. Provide trained and equipped flagmen to regulate traffic when construction operations and/or traffic encroach on public vehicular or pedestrian traffic lanes.

1.07 FLARES AND LIGHTS

A. 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 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 the Owner.

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

SECTION 01580

PROJECT IDENTIFICATION AND PERMIT BOX

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

A. The Contractor shall comply with and be responsible for all requirements of the Project Manual, without exception.

B. The Contractor shall comply with applicable requirements in this Section and more specific requirements of Section 00800, Special Project Conditions and Section 01100, Summary of Work.

C. Furnish, install and maintain typical Permit Box as approved by the Owner.

D. Provide temporary, on site informational signs to identify key elements of the construction facilities.

E. Remove the Permit Box upon completion of the construction Work of this contract.

F. Permit Box to be mounted on a utility pole near the project entrance within fifteen (15) calendar days of the Notice to Proceed (NTP).

1.02 RELATED REQUIREMENTS

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

PART 2 – PRODUCTS

2.01 SIGN MATERIALS

To Be Determined By The Owner

2.02 TEMPORARY SIGNAGE

To Be Determined By The Owner

PART 3 – EXECUTION

3.01 PREPARATION

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

3.02 MAINTAINANCE

The Contractor shall be responsible for the cost of maintaining the Permit Box.

3.03 REMOVAL

The Contractor shall be responsible for the cost of removing the Permit Box.

END OF SECTION 01580

SECTION 01590

FIELD OFFICE AND SHEDS

(Not Used: There are no field offices requirements in this project.)

END OF SECTION 01590

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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

PART 1- GENERAL

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 consistent with the requirements of the Construction Contract Documents..

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 REQUIRMENTS

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

B. The Technical Specifications, Sections 0200 through 1900, 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 approved Drawings and will be coordinated in the field by the Contractor.

B. Existing control points and property line markers will be shown on the Owner's survey drawings.

1.04 QUALIFICATIONS OF SURVEYOR OR ENGINEER

A. For Surveying, a qualified engineer or registered 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 Owner's survey drawings or as determined from investigation of the existing conditions.

B. Verify property, grades, lines, levels and dimensions indicated.

C. 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, Contractor shall 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: FY17
      a. Stakes for grading, fill, and topsoil placement.
      b. Utility slopes and invert elevations.
      c. Limits of pavement (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 assigned to the Project to the Owner.

B. On request of the Owner, submit documentation to certify accuracy of field engineering work and compliance with Construction Contract Documents.

C. Submit certificate signed by registered engineer or surveyor certifying that elevations and locations of Improvements: FY17 are in conformance, or non-conformance, with Construction 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 all foundation walls, pavement and other major site Improvements: FY17 , prepare certified survey showing dimensions, locations, angles, and elevations of construction.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION 01700

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SECTION 01710

FINAL CLEANING

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

A. Contractor shall comply with and be responsible for all requirements of the Project Manual, without exception.

B. Contractor shall comply with applicable requirements in this Section and more specific requirements in Section 00800, Special Project Conditions, and Section 01100, Summary of Work.

C. Execute final cleaning at completion of the Work as required by the Construction Contract Documents.

1.02 RELATED REQUIEMENTS

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

1.03 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with all applicable codes, ordinances, regulations, and anti-pollution laws.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Using cleaning materials only on surfaces recommended by cleaning material manufacturer.

D. Refer to applicable manufacturer's recommendations for specific products and materials.

PART 3 – EXECUTION

3.01 FINAL CLEANING

A. Execute prior to inspection at Substantial Completion.

B. Employ skilled workmen or professional cleaners for the final cleaning.

C. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces, and clean as follows:

1. Remove grease, dust, dirt stain, labels, fingerprints, and other foreign materials from site-exposed interior and exterior surfaces; wash and polish surfaces so designated to shine finish.

2. Repair, patch and touch-up marred surfaces to specified finish, to match adjacent surfaces.

D. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.

E. Clean roof areas of debris; flush roof drainage system(s) with water until clear.

F. Prior to final completion, or Owner occupancy, Contractor and Owner shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify that the entire Project Work area is clean.

G. Leave Project Work area clean and ready for use and occupancy.

END OF SECTION 01710

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SECTION 01731

CUTTING AND PATCHING

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

A. Requirements and limitations of cutting and patching associated with the Work of this Contract.
B. Cutting, fitting and patching, including attendant excavation and backfill required completing the Work of this Contract.
C. Assume that concealed or previously unknown conditions may be encountered during the execution of the Work. No consideration whatsoever will be given to any claim for additional cost and/or time resulting from such conditions that can reasonably be expected, which are ordinarily encountered or which are generally recognized as inherent in the character of the Work anticipated for this Project.

1.02 RELATED REQUIREMENTS

A. Division 1, General Requirements in the Project Manual without exception.
B. The Technical Specifications, which may be applicable and incidental to the Work of the respective Sections.

1.03 DESCRIPTION AND SCOPE

A. Execute cutting, fitting and patching, including attendant excavation and backfill required to complete the Work or to:

1. Make all parts of the Work fit together.
2. Uncover portions of the Work to provide for installation of ill-timed work.
3. Remove and replace defective work, products and/or equipment.
4. Remove and replace work not conforming to the requirements of the Construction Contract Documents, approved Drawings and Technical Specifications.
5. Remove samples of installed work as specified for testing.
6. Provide routine penetrations of non-structural surfaces for installation of mechanical, electrical and plumbing work.
7. Uncover work that has been covered prior to a required observation by the Owner

1.04 SUBMITTALS

A. The Contractor shall submit a written request to the Owner seventy two (72) hours in advance of any cutting or alteration work. The written request/notice shall state the location, date and time the work will be accomplished. The preceding will apply to instances that affects:

1. Work of other Contractors engaged by the County on the site.
2. The structural value or integrity of any element of the Work of the Project.
3. The integrity or effectiveness of weather exposed or moisture resistant elements of, or systems within the Work of the Project.
4. Efficiency, operational life, maintenance and/or safety of the operational elements of, or systems within the Work of the Project.
5. The visual and esthetic qualities of sight exposed elements of the Work of the Project.

B. The Contractor's requests / notices shall include, at a minimum:

1. Owner RFP / Bid Number.

2. Location and description of the affected work to be performed.
3. The necessity for cutting, patching, alteration or excavation.
4. Effect of the work on the Owner and / or its Contractors and abutting property.
5. Effect of the work on the integrity of the structural and/or weatherproof elements of the Work of the Project.
6. Description of the proposed work:

    a. Scope of cutting, patching, alteration or excavation.
    b. Contractor's prime or sub-contractors who will execute the work.
    c. Products proposed to be used.
    d. Extent of refinishing to be done.
7. Alternatives to cutting, patching, alteration or excavation.
8. Written permission of any affected entity other than the Contractor's prime and sub-contractors.

C. Should the conditions and schedule of the work to be performed indicate a change of products from the original installation, the Contractor shall submit a written request to the Owner for substitution pursuant to the stipulations in Section 01600, Product Requirements.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Contractor shall comply with the final, approved Technical Specifications and standards for each specific product involved.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Contractor shall examine existing conditions in the area of the work, including any elements subject to damage or to movement during cutting, patching, alteration or excavation.
B. After uncovering the work, Contractor shall inspect the conditions affecting installation of products, or performance of the work.
C. Contractor shall report unsatisfactory or questionable conditions to the Owner in writing. No work is to proceed until a written response is received from the Owner.
D. Beginning of cutting, patching, alterations or excavation operations shall be considered as acceptance, by the Contractor of the existing conditions.

3.02 PREPARATION AND PROTECTION

A. Contractor shall provide adequate temporary support as necessary to assure structural value or integrity of the affected portion of the work.
B. Contractor shall provide devices and methods to protect adjacent work and other portions of the Work of the Project from any damage.
C. Contractor shall provide protection from the elements of weather for that portion(s) of the Work of the Project that may be exposed by cutting, patching, alteration or excavation.
D. Contractor shall maintain excavations free from water and comply with the requirements of state and local agencies having jurisdiction.

3.03 DUST CONTROL

A. Contractor shall obtain approval of the means and method by which dust and debris will be controlled from the Owner.

B. Contractor shall provide and maintain positive methods of dust control and apply dust control materials to minimize raising and spreading of dust from cutting, patching and alteration operations.

C. Contractor shall conform to the requirements of Section 01510, Temporary Construction Controls.

3.04 PERFORMANCE

A. Open flame torch cutting operations require a "Hot Work" permit in compliance with current state and local codes and regulations. Contractor shall exercise all fire and safety precautions as required.

B. Contractor shall execute all cutting, patching, alteration and demolition by methods that will prevent damage to other work, and will provide proper surfaces to receive installation of repairs or alterations.

C. Contractor shall execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.

D. Contractor shall cut, remove and legally dispose of selected mechanical equipment, components and materials as indicated, including but not limited to removal of mechanical piping, heating units, plumbing fixtures and trim, and other mechanical items made obsolete by the modified work.

E. Contractor shall restore work that has been cut or removed, and shall install new products to provide completed work in accordance with the requirements of the Construction Contract Documents.

F. Contractor shall fit work tight to pipes, sleeves, ducts, conduit, and other penetrations through vertical and/or horizontal surfaces. Where fire rated separations are penetrated, fill space around pipe or insert penetration with material having physical characteristics equivalent to fire resistant requirements of penetrated surfaces in accordance with state or local codes and acceptable construction practices.

G. Contractor shall refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:

1. For continuous surfaces, refinish to nearest intersection.
2. For an assembly, refinish entire unit.

H. Contractor shall employ the Original Installer or Fabricator of Work performed under this Contract to execute cutting and patching for:

1. Weather exposed or moisture resistant elements to maintain warranty and/or bonds.
2. Sight exposed specialty finished surfaces.

END OF SECTION 01731

SECTION 01770

CLOSEOUT PROCEDURES

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. The Contractor shall comply with applicable requirements in this Section and more specific requirements in Division 1, Section 01100, Summary of Work.

C. The Contractor shall comply with the requirements stated in the Construction Contract and in approved and permitted Drawings and Technical Specifications for the Work.

1.02 RELATED REQUIREMENTS

A. Conditions of the Construction Contract: fiscal provisions, legal submittals and additional administrative requirements.

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

C. Closeout submittals required of trades as may be indicated in various sections of the approved Technical 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 (Beneficial Occupancy) 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 in Section 00750 no later than the dates indicated on said Schedule ("Interim Completion Date")

B. The Contractor acknowledges that such Interim Completion Dates are essential to the Owner's plans and use 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. The Owner shall be notified by the Contractor once the Work is substantially complete (when all the punch list items have been addressed).

2. The Owner will schedule an inspection within ten (10) calendar days of the notification.

B. After Work is substantially complete, Contractor shall:

1. Complete Work listed for completion or correction within designated form.

2. 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. Construction Contract Documents have been reviewed.

2. Work has been examined for compliance with Construction Contract Documents.

3. Work has been completed in accordance with Construction Contract Documents.

4. Equipment and systems have been tested in the presence of the Owner and the appropriate County 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-examined, 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 (unless waived by the Owner) 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 Construction 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. Certificates of Inspection:

B. Project Record (Permit)Documents, in accordance with Section 01781

C. Operating and Maintenance Data, in accordance with Section 01782

D. Warranties and Bonds, in accordance with Section 01790.

E. Spare Parts and Maintenance Materials,, in accordance with Section 01785.

1. Provide products, spare parts, and maintenance materials in quantities specified in each approved Specification Section in addition to that required for completion of Work.

F. 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 and notarized 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 was 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 Construction Contract and Section 01290, Payment Procedures of the Project Manual.

1.11 ADDITIONAL ADJUSTMENT

A. No adjustments to the Construction 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 Construction Contract. The Contractor 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; Section 01330, Submittal Procedures; Section 01322, Photographic Documentation; and Section 01770, Close Out Procedures.

C. Contractor shall conform to the requirements of the Owner, Georgetown County, and such other federal, state and municipal agencies having jurisdiction.

1.02 RELATED REQUIREMENTS

A. Division 0, Bidding and Contract Documents, in the Project Manual without exception.

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

1.03 MAINTENACE OF DOCUMENTS AND SAMPLES

A. For duration of Project, maintain at job Site the following:

1. One copy of the Drawings, Technical 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 having jurisdiction.

B. Store documents and samples in Permit Box apart from documents used for construction.

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 Design/Builder'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. Unless waived by the Owner, 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 on full size sheets (24 in. x 36 in. ft.) capable of being reproduced. These shall be made from the approved, original drawings, which shall be provided to a commercial reprographics service at an appropriate time. All of the aforementioned shall be at the Contractor’s sole cost and expense.

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 asphalt and concrete pavement.
6. Dimensional location, vertical and horizontal, of storm water drainage system including pipe invert elevations.

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 Construction 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. Owner RFP / Bid Number.
3. Contractor's name and address.
4. Title and number of each Record Document.
5. Signature of Contractor 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 in electronic format to be determined by Owner.

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.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION 01790

END OF PROJECT MANUAL, VOLUME 1

PROJECT MANUAL

FOR

Petigru Drive Comprehensive Engineered Roadway Improvements: FY18

Bid No. 18-005

GEORGETOWN COUNTY, SOUTH CAROLINA

VOLUME II

DIVISION 2 – SPECIAL PROVISIONS & SPECIFICATIONS

PREPARED BY:
GEORGETOWN COUNTY
DEPARTMENT OF PUBLIC SERVICES
PUBLIC WORKS DIVISION
AND

DAVIS & FLOYD ENGINEERS

DAVIS & FLOYD
SINCE 1954

March 2018

VOLUME II - PROJECT MANUAL

DATE: April 2018

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Petigru Permits: NOI and CZC are in to OCRM. Georgetown County Storm Water permit is under review. Final permits will be sent by published addendum.

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Project plans and drawings begin on page 153. The complete index appears in Section 00900 on beginning on page 49 of Volume 1.

Plans and drawings should be plotted to 22”x36” to maintain scale.

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SPECIAL PROVISIONS

JOB NUMBER	RFP NUMBER	COUNTY
31519.05	RFP #18-005	Georgetown

This project is to be constructed under the South Carolina Department of Transportation's Specifications for Highway Construction Edition of 2007, the Supplemental Technical Specifications in effect as of October 2015 or as referenced in these Special Provisions, and the following Special Provisions.

*The Contractor is hereby advised that the construction of RFP #18-005 will be managed by Georgetown County.

(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 current SCDOT Standard Drawings as of March 2018, 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	http://www.scdot.org/business/pdf/2007_full_specbook.pdf
SCDOT Standard Drawings	http://www.scdot.org/business/standard-drawings.aspx
SCDOT Supplemental Technical Specifications	http://www.scdot.org/business/road-technical-specs.aspx

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

See attached Supplemental Specification dated **May 4, 2009** on page **157**.

(4) 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.

(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 County Project Manager must approve these certifications and reports before the contractor may install these materials.

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.

(6) SECTION 106: QUALIFIED PRODUCT LISTINGS:

All references to "Approval Sheet" or "Approval Policy" are to replaced with "Qualified Products Listing (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.

(7) SECTION 108 (PROSECUTION AND PROGRESS)

Section 108.9 (Failure to Complete the Work on Time)

Delete Section 108.9 in its entirety and substitute the following in its place:

"County and Contractor recognize that time is of the essence and that the traveling public and Department will suffer loss, inconvenience and other damage if the work is not substantially complete in accordance with the time(s) specified herein, which damages would be difficult if not impossible to ascertain. Accordingly, the County and the Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall pay the County the amounts stipulated below.

LIQUIDATED DAMAGES SCHEDULE

Liquidated Damages	
$500	*Per Day*

Contractor further agrees that in addition to the liquidated damages specified above, the Contractor shall pay the County the actual costs to County for any inspector or inspectors necessarily employed by County on the work and the actual costs to County for the Engineer's observation of construction and project representative services, including all travel and subsistence expenses after the date specified for Project completion until the work is completed and ready for final payment.

(8) SECTION 106: SOUTH CAROLINA MINING ACT:

See attached Supplemental Specification dated **March 20, 2003** on page **161.**
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.

(9) SECTION 103.8 CONTRACTOR'S LIABILITY INSURANCE:

Section 103.8 is hereby deleted and replaced with the requirements of **Section 29 on pages 11 and 12 of this Project Manual RFP #18-005**.

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

Section 105.8.2 applies to this project. Partial Payments for this work shall be made according to the following chart and the approved schedule of values:

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

(11) SECTION 107: COORDINATION OF UTILITY RELOCATION WORK WITH ROADWAY CONSTRUCTION:

As it is not economically feasible to complete the rearrangement of all utility conflicts in advance of the roadway 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.

It is the responsibility of the Contractor to call Palmetto Utility Protection Service (1-888-721-7877) three (3) days prior to work so that existing utilities can be properly marked.

(12) CONTRACTOR ACTIVITY WORK SCHEDULE AND SCHEDULE OF VALUES:

The contractor shall furnish a construction schedule for each road to be improved under this contract. This schedule shall be in a bar graph format and sufficiently detailed to indicate the type of work to be done and the duration of each operation.

In addition, the contractor shall furnish the Resident Construction Engineer a written activity schedule of his work for 4 week periods, with the schedules being updated each 2 weeks. The schedule shall show the scheduled work activity for each week.

The purpose of the above schedule is to provide the Resident Construction Engineer with adequate advance information in order that he may schedule his personnel so as to provide construction engineering and inspection. In the event the contractor does not proceed by his schedule, then the County will not be responsible for delays to the contractor which may be caused by his failure to abide by his schedule.

The Contractor shall provide a schedule of values showing a breakdown of the contract sum for the various operations that will be accomplished as a part of this work. This schedule of values will determine the amount of the partial payments made to the Contractor for each month's work. The values placed upon this schedule will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price. The schedule of values shall be submitted to the Resident Construction Engineer not less than 10 days prior to making an application for partial payment in a form that is acceptable to the Resident Construction Engineer.

(13) LUMP SUM BID:

The **lump sum bid** for the construction of this project shall include but not be limited to clearing and grubbing of roadway, erosion control, proof rolling existing subgrade, all borrow excavation, all unclassified excavation for drainage, all drainage pipe, fine grading, stabilized aggregate base course, asphalt surface course, pavement markings, signs, traffic control, quality control, and temporary and permanent grassing. The lump sum price shall include the cost of all materials, labor, equipment, overhead and profit as necessary to construct the project in accordance with the plans, the specifications and these special provisions with the exception of muck excavation which is included on the bid form.

Additional payment will be made for muck excavation as described in Special Provision #41 of this document.

This Special Provision #13 shall supersede any other method of payment described in the SCDOT References listed in Special Provision #2 of this document or any other Special Provisions contained in this document with the exception of Special Provision #41.

(14) NOTICE TO PROCEED:

Unless otherwise specified in this 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.

(15) SECTION 107: CRANE SAFETY (REVISED 12/01/2007):

CRANE SAFETY:

The Contractor's attention is directed to the following Crane Safety criteria. All items listed shall be submitted to the Resident Construction Engineer (RCE) before any crane operations can proceed. 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 regulations (OSHA), the American National Standards Institute [ANSI] adopted American Society of Mechanical Engineers (ASME) crane standards, and other applicable standards including, but not limited to the following:

- OSHA 29 CFR 1926.550 "Cranes, Derricks, Elevators, & Conveyors"
- OSHA 29 CFR 1926.605 "Marine Operations & Equipment"
- OSHA 29 CFR 1926.251 " Rigging Equipment for Material Handling"
- OSHA 29 CFR 1926.32 "Definitions"
- ASME B30.5-2000 "Mobile and Locomotive Cranes"
- ASME B30.8-1999 "Floating Cranes and Floating Derricks"

Crane Safety Submittal List

1. **Site Specific Safety Plan:** Guidelines for crane and lifting operations shall be developed by a qualified person, for each contractor conducting crane and lifting operations on the project. Subcontractors must submit their Work Plan to the prime contractor for approval before submittal to the SCDOT. Plans shall address site conditions such as environmental conditions, wind, adjacent structures, overhead power lines, underground utilities, crane/barge combination procedures, public protection and identification of routes for suspended loads to ensure no employees are working directly below the load. Plans shall provide for conducting pre-lift meetings prior to lifting operations as necessary.

2. **Critical Lifts:** Contractor shall submit Critical Lift Procedures, including a critical lift checklist and critical lift identification process. All critical lifts shall be identified and properly safeguarded. A critical lift is defined as a load equaling 75% of the rated capacity of the crane after all deductions, whether on land, on a barge, or if a load requires the use of more than one crane. Critical lift checklists, which include the date/time completed, shall be available for review upon request.

3. **Crane Inspections:** Inspection records for all cranes shall be current and readily accessible for review upon request. Contractor shall submit proof of crane inspector qualifications and training.

    a. A copy of the most recent periodic [annual] crane inspection conducted by a competent person, and the documented correction of defects shall be submitted.

b. A copy of the frequent [monthly] crane inspection conducted by the competent persons(s) and documented correction of defects shall be submitted.

4. **Safety Person:** Provide the name and qualifications of the "Competent Person" responsible for crane safety and lifting operations. The named competent person will have the responsibility and authority to stop any work activity due to safety concerns.

5. **Crane/Barge Combinations:** Contractor shall provide a plan prepared by a competent person for all lifts on floating crane/barge combinations. The plan shall include lifting capacities and method of securing the crane to the barge. Critical lifts on floating crane/barge combinations shall be certified by a qualified professional engineer before the lift.

6. **Riggers:** Provide the qualifications, experience and training of the persons responsible for rigging operations. Training should include, but not be limited to, weight calculations, center of gravity determinations, sling selection and capacities, sling and rigging equipment inspection, safe rigging practices, and determining load weights.

7. **Crane Operators:**

- For critical lifts, all crane operators shall be certified by the National Commission for the Certification of Crane Operators (CCO) or the National Center for Construction Education and Research (NCCER).

- For non-critical lifts, crane operators shall be CCO or NCCER certified. In lieu of CCO or NCCER certification, the following are acceptable until January 2009:

  - Crane operators must have satisfactorily completed the Carolinas AGC's Professional Crane Operator's Proficiency Program, as approved by the SCDOT; or

  - Crane operators shall have a minimum of 5 years of experience, and be under the direct supervision of someone who is either CCO or NCCER certified, has satisfactorily completed the Carolinas AGC's Professional Crane Operator's Proficiency Program, or has satisfactorily completed the Carolinas AGC's Lift Supervisor program, as approved by the SCDOT.

- For crane lifts less than 50% of the rated capacity, after all deductions, which are not within a boom length of traffic, railroads, or public access areas, crane operators shall either be CCO or NCCER certified, or under the direct supervision of someone who is CCO or NCCER certified. In lieu of CCO or NCCER certification, the following are acceptable:

  - Crane operators must have satisfactorily completed the Carolinas AGC's Professional Crane Operator's Proficiency Program, or

  - Crane operators shall be under the direct supervision of someone who has satisfactorily completed the Carolinas AGC's Professional Crane Operator's Proficiency Program, or Carolinas AGC's Lift Supervisor's Program.

Contractor shall submit current CCO or NCCER certification, or documentation of completion of the Carolinas AGC's program*, along with medical evaluations**, and resume of relevant work experience for each operator and supervisor.

* Operator proficiency program training must remain current, within a 5-year expiration date.

****** Medical evaluations must remain current, within a 3-year expiration date. Medical evaluation shall meet or exceed the CCO or NCCER medical evaluation requirements [utilize either the CCO or NCCER Physical Examination Form or a current DOT Medical Examiner's Certificate.

(16) SECTION 107: CONTRACT PROVISIONS 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 Employments;

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 worker who supply the documents required pursuant to S.C. Code 8-14-20(B)(2).

(17) SECTION 109: RETAINAGE

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

(18) SUBLETTING OF CONTRACTS (SPECIALTY ITEMS);

The following items of work, when not performed by the Prime Contractor, will be designated as Specialty Items in all contracts in which the item does not constitute thirty percent (30%) or more of the original contract value:

Pavement Markings	Permanent Roadway Signs
Guardrail	Signalization
Milling Asphalt Pavement	Electrical/Lighting
Grassing	Specialized Retaining Walls
Landscaping	Fencing
Erosion Control	Right of Way Surveying
Permanent Construction Signs	Railroad Track Work
Utilities	Jacking and Boring
Contaminated Soil & Tank Removal	Bridge Floor Grooving
Bridge Barrier Walls	Milled Rumble Strips
Traffic Count Stations	Buildings
Drilled Shafts & Casings	Navigational Lighting
Pier Fender Systems	Sound Barrier Walls

(19) CONTRACT TIME AND DETERMINATION AND EXTENSION OF CONTRACT TIME:

Completion date for this project is **240 Days from Notice to Proceed.**

(20) MAINTENANCE OF TRAFFIC:

In addition to the Contractor maintaining traffic throughout the length of this project as required by the Specification, it will also be necessary that the Contractor, prior to beginning any work, submit to the Resident Construction Engineer for approval his plan for constructing these projects.

(21) 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.

(22) DIVISION 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".

(23) DIVISION 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 closures 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 than 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	Intersecting Roads	Total (SF)
Petigru Drive	C	2 on Aspen Loop	152
	C	1 on Petigru Drive	76
	E	1 on Swampbay Court	24
		Contract Total	252

(24) MAINTENANCE STONE:

Maintenance Stone used on this project shall conform to the gradation requirements or Section 305, or to the gradation specified for Aggregate No. CR-14 in the Standard Specifications.

(25) SECTION 106: QUALITY CONTROL/QUALITY ASSURANCE OF EARTHWORK COMPACTION:

The attached Supplemental Specification dated **January 18, 1996** on page **164** is hereby amended as follows:

Basis of Payment: Quality Control for Earthwork as provided for in this provision will be paid for at the contract lump sum price for Quality Control for Earthwork, which price and payment shall be full compensation for all labor, equipment, materials, tools, testing facilities, retesting where necessary, transportation and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

General: Quality Control for Earthwork as required in the referenced supplemental specification shall be applied to the final lift of subgrade prior to approval by the County to begin the base course. Proof rolling per Section 211 of the 2007 Standard Specification for Highway Construction will be the primary compaction quality control for initial and intermediate lifts of embankment.

Basis of Payment: Quality Control for Earthwork shall be paid for as a lump sum price. Partial payments may be made on a percentage basis of length of roadway subgrade that has been approved for the installation of the Base Course divided by total length of roadway in the project. If the length of actual roadway constructed is adjusted from what is shown in the plans, the lump sum payment will be increase or decreased on a percentage basis equal to the percent change in length of roadway to be constructed.

Payment will be made under:

Item No.	Pay Item	Pay Unit
1061100	Quality Control for Earthwork	Lump Sum

(26) SECTION 106: QUALITY CONTROL/QUALITY ASSURANCE FOR BASES AND SUBBASES:

See Attached Supplemental Specification dated **June 1, 2001** on page **172.**

Basis of Payment: Quality Control for Bases and Subbases shall be paid for as a lump sum price. Partial payments may be made on a percentage basis of length of roadway base course that has been approved for the prime coat application or paving divided by total length of roadway in the project. If the length of actual roadway to be paved is adjusted from what is shown in the plans, the lump sum payment will be increased or decreased on a percentage basis equal to the percent change in length of roadway to be paved.

Payment will be made under:

Item No.	Pay Item	Pay Unit
1061200	Quality Control for Bases and Subbases	Lump Sum

(27) SECTION 208: FINE GRADING:

See attached Supplemental Specification dated **January 4, 2012,** on **page 180**.

(28) SECTION 305: GRADED AGGREGATE BASE COURSE:

Only one type of Graded Aggregate Base Course is to be selected. The Contractor is to indicate on the attached for on page **68** which type has been selected for use on this project. This form is to be submitted to the County Project Manager at the Preconstruction Conference.

(29) SECTION 401: ASPHALT BINDER ADJUSTMENT INDEX:

Because the base bid of this project is Lump Sum, an Asphalt Binder Adjustment is **NOT** included for this project.

(30) PAVING OF DRIVEWAYS:

All earth driveways shall be surfaced as a part of this contract. Quantities for the surfacing of driveways are considered as being paved to the right-of-way line.

(31) BORROW EXCAVATION:

Borrow pit location – Borrow material for this project shall not be obtained from wetlands, streams, or rivers.

(32) SECTION 714: 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.

SECTION 714: PIPE END TREATMENTS (11/14/2008):

REFERENCE: SCDOT Supplemental Technical Specification SC-M-714

DESCRIPTION:

For exposed pipe culvert ends, provide an end treatment in accordance with this special provision.

MATERIALS:

Rigid pipe culvert is Reinforced Concrete Pipe (RCP: 714-205-00). Flexible pipe culvert is either Spiral Ribbed Aluminum Pipe (SRAP: 714-610-00), High Density Polyethylene pipe (HDPE: 714-705-00), or Corrugated Aluminum Alloy Pipe (CAAP: 714-605-00).

Use minimum Class B riprap for pipe up to 84" diameter. Use minimum Class C riprap for pipe 84" diameter or larger.

Use minimum Class 4000 concrete (4000P for precast).

Use ASTM A-706 grade 60, low-alloy steel deformed rebar.

Use minimum AASHTO M-196 Alclad 3004-H32 alloy aluminum.

Use Type M Mortar Grout unless specified otherwise.

CONSTRUCTION REQUIREMENTS:

Use one of the following end treatments as specified in the plans or special provision:

For **ALL** exposed pipe ends, when an end treatment is not specified in the plans, use **Pipe Riprap Protection** (804-305A-01). For flexible pipe larger than 24" diameter, install pipe straight headwall, pipe end structure, flared end section, or wingwall section in addition to riprap.

Use **Pipe Beveled End** (719-610-00) when specified in the plans or special provisions. Beveled ends may only be used on flexible pipe up to 24” diameter and on rigid pipe up to 60” diameter. When beveled ends are specified on flexible pipe larger than 24” diameter, install pipe straight headwall, pipe end structure, flared end section, or wingwall section.

Use **Pipe Straight Headwall** (719-605-00) when specified in the plans or special provisions. Use straight headwall only in locations where pipe exposed end does not face the direction of traffic.

Use **Pipe End Structure** (719-615-00) when specified in the plans or special provisions. Use pipe end structure in locations where pipe exposed end faces the direction of traffic. Pipe end structures may be used in other locations if approved by the RCE.

Use **Pipe Flared End Section** when specified in the plans or special provisions.

Use **Pipe Wingwall Section** when specified in the plans or special provisions. Use pipe wingwall only in locations where pipe exposed end does not face the direction of traffic.

Completely seal interface between pipe and end treatment with grout. If bricks or shims are used to place pipe, take care to remove all air pockets and voids when grouting.

For systems not designed in the SCDOT Standard Drawings, provide shop drawings, installation procedure and design calculations for review by RCE. Design must include provision to control erosion around the structure and prevent the separation of the end treatment from the pipe system. Design must provide for a proper seal at all construction joints including the interface between the pipe and the structure. Design must be self-supporting and not induce any additional loads on the pipe. Submit designs for consideration as new standard drawings to the Design Standards Engineer at the address listed in the SCDOT Standard Drawings book.

MEASUREMENT:
Measure pipe in accordance with SC-M-714

End treatments for pipe will not be measured.

Replace SC-M-714 subsections *x*.4, paragraph 4 with:

Measure pipe culvert by the length of the centerline of each pipe run in linear feet (LF), complete and in place. For exposed ends, end treatments, beveled ends, flared ends, pipe end structures, and pipe wingwalls, measure the length to the outside exposed edge of the pipe (including entire length of beveled pipe section).

Add the following paragraphs to SC-M-714 subsections *x*.4:

Measure riprap in tons by the weight sufficient to protect end of pipe from erosion.

Measure geotextile for erosion control under riprap in square yards as required to separate the riprap from the embankment.

PAYMENT:

Replace SC-M-714 subsections *x*.5, paragraph 1 with:

Pipe beveled ends will be included in the unit cost of the pipe as specified in the plans. Pipe culvert and end treatments, measured as provided in **Subsection *x*.4**, are paid for at the contract unit price for the respective items, which price and payment is compensation for furnishing all material, labor, equipment, tools including hauling and placing all pipe sections and materials, excavation of the entire standard trench, bedding, and pipe backfill as described in the measurement section (both structural and embankment backfill in this region), removal of existing pipe to be replaced, constructing pipe joints, removal of old end treatments, cleaning out pipe, disposal of surplus materials, all visual inspection, and all incidentals necessary to complete the work.

Add the following paragraph to SC-M-714 subsections *x*.5:

Payment for riprap and geotextile for erosion control under riprap as measured in subsection *x*.4 includes all direct and indirect costs and expenses necessary to complete the work.

(33) SECTION 810: SEEDING:

SCDOT Supplement Technical Specification SC-M-810 or SC-M-810-2 shall not apply to this contract. Seeding shall be installed, measured, and paid for in accordance with **Section 810** of the **2007 Standard Specifications for Highway Construction**.

(34) SEEDING AND EROSION CONTROL MEASURES:

In addition to all the erosion control measures specified in the Standard Specifications, the plans and these Special Provisions, the Contractor shall construct all erosion control devices promptly as directed by the Engineer. Seeding of all disturbed areas shall be carried out as the grading progresses.

Failure of the Contractor to comply promptly and adequately with all the required erosion control measures and seeding will result in stopping all contract operations until corrective action has been taken.

(35) SECTION 810: CO-PERMITTEE AGREEMENT & CONTRACTOR CERTIFICATION:

In accordance with the NPDES General Permit, all Contractors and Subcontractors must sign the Co-Permittee Agreement or the Contractor Certification, based on the work being performed, prior to beginning work. Section 1 of the form must be signed by all Contractors and Subcontractors performing land disturbing activities. This applies to all clearing and grubbing, grading operations, drainage installation, curb and gutter, sidewalk, bridge construction, culvert construction, erosion control, seeding, utilities, etc. Sections 2 must be signed by all Contractors and Subcontractors performing non-land disturbing activities. A Contractor or Subcontractor that has not signed the agreement will not be permitted to perform work on this project. No additional compensation will be made in association with this agreement.

(36) SECTION 815: EROSION CONTROL MEASURES:

See attached Supplemental Specification dated **January 1, 2009**, on page **183**.
See attached Supplemental Specification dated **July 1, 2011**, on page **185**.

(37) GEOTEXTILE FOR DRAINAGE FILTRATION

If #57 Stone Bedding is required by the Engineer, then this fabric shall be used to wrap the stone bedding. See attached Supplemental Specification on page **186**.

(38) ROLLED EROSION CONTROL PRODUCTS (ECB'S & TRM'S)

Erosion Control Blankets (ECB's) and Turf Reinforcement Mats (TRM's) shall meet the requirements SCDOT Technical Specification **SC-M-815-09 dated April 4, 2011 (see Special Provision #2)**. Use of these products is specified in the OCRM/DHEC Land Disturbance permit so no substitutions will be allowed and failure to install these products per the plans and specified requirements will be a violation of the permit.

(39) HYDRAULIC EROSION CONTROL PRODUCTS (HECP)

These products shall meet the requirements SCDOT Technical Specification **SC-M-815-11 (see Special Provision #2)**. Use of these products is specified in the OCRM/DHEC Land Disturbance permit so no substitutions will be allowed and failure to install these products per the plans and specified requirements will be a violation of the permit.

(40) MUCKING EXCAVATION

Any unsuitable material within 2' of pavement limits. Mucking will be paid for by the cubic yard, 12" below existing ground if it is below Subgrade.

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.

Over 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.

(41) ROADWAY CONSTRUCTION WITHIN SCDOT RIGHT-OF-WAY

The roadway apron that ties to a SCDOT Roadway shall be full depth asphalt as specified by the note on the typical section. The apron shall end at a perpendicular line at the radius return termini farthest from the SCDOT roadway.

(42) PRIVACY FENCE

See fence detail in the Supplemental Specifications of this contract. 4 x 4 fence posts shall be embedded at least 3 feet into the ground and post holes shall be backfilled with concrete. See Special Provisions for

END OF SPECIAL PROVISIONS

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SECTION D – SUPPLEMENTAL SPECIFICATIONS

May 4, 2009

ERRATA TO 2007 STANDARD SPECIFICAITONS 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
~~BDGE*~~	~~Bridge Design Geotechnical Engineer~~	GDSE*	Geotechnical Design Support Engineer
~~SHE*~~	~~State Highway Engineer~~	DSE*	Deputy Secretary for Engineer

*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 2.4.4**” to “**Subsection 2.4.5**”.

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 **Subsection 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.

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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 allow 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.

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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.

January 18, 1996

QUALITY CONTROL/QUALITY ASSURANCE OF EARTHWORK COMPACTION

DESCRIPTION: The Contractor is advised that the Quality Control Testing of Earthwork Compaction shall be performed by the Contractor as outlined in this provision and related documents. Department personnel shall perform Quality Assurance Testing as outlined herein, and Record Testing as per normal procedures. Except as revised in this provision, Quality Control and Quality Assurance shall be performed in accordance with the procedures outlined in the Standard Specifications and Construction Manual. Related test procedures are listed below:

SC-T-22 Determining Moisture Content of Soils By Carbide Gas Method
SC-T-29 Field Determination of Maximum Dry Density and Optimum Moisture Content of Soils by One-Point Proctor Method.
SC-T-33 Field Determination of Density and Moisture Content of Soils and Aggregate Bases by the use of the Troxler 3401 Series Nuclear Gauge

The actual dry density of the embankment or subgrade material shall be determined as outlined in SC-T-33, while the maximum dry density and optimum moisture of the material shall be determined by the one-point proctor method, as outlined in SC-T-29.

Compaction Testing of Embankment: Testing of the embankment shall be performed in accordance with the following table

Test Performed by:	Test Procedure Performed:	Required Frequency of Test:	Location of Test:
Contractor (Quality Control)	Compaction Test (SC-T-33)	1 per lift per 500' length of embankment	Random within 500' section as determined from SC-T-100
	One-Point Proctor (SC-T-29)	Min. of 2 per day or when soil conditions change	Material sampled shall be obtained within area of days work and representative of material placed

Note: The Department reserves the right to alter or increase its testing frequency as deemed necessary by the Engineer to insure adequate assurance of the Contractor's Quality Control program.

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Compaction Testing of Subgrade: Testing of the Subgrade shall be performed in accordance with the following table:

Test Performed by:	Test Procedure Performed:	Required Frequency of Test:	Location of Test:
Contractor (Quality Control)	Compaction Test (SC-T-33)	1 per lift per 500' length of embankment	Random within 500' section as determined from SC-T-100
	One-Point Proctor (SC-T-29)	Min. of 2 per day or when soil conditions change	Material sampled shall be obtained within area of days work and representative of material placed
Department (Record)	Compaction Test (SC-T-33)	Frequency and Location as outlined in Construction Manual	

Note: The Department reserves the right to alter or increase its testing frequency as deemed necessary by the Engineer to insure adequate assurance of the Contractor's Quality Control program.

Equipment: The Nuclear Density Gauge used shall be provided and operated by the Contractor and shall be of the Troxler 3400 series or equivalent. All equipment and personnel necessary to perform these tests shall be certified by the Department's Research and Materials Laboratory.

Documentation: *Lab Form 229* shall be completed by the Contractor and submitted to the Resident Engineer on a daily basis. Subsequent placement of embankment material shall not proceed until the above reports are received.

Deficient areas as determined by the Contractor's or Department's testing, shall be retested following corrective actions to improve compaction. Retested areas shall be indicated by an asterisk next to the Station No. certification and the description as a "Retest" in the remarks section of the form. Areas which do not attain required compaction may be required to be removed and replaced at the discretion of the Engineer at no additional cost to the Department.

No separate measurement or payment is included in the contract for this inspection work. All costs for this inspection work are to be included in other items of work.

SC-T-22 - DETERMINING MOISTURE CONTENT OF SOILS BY CARBIDE GAS METHOD

SC-T-29 - FIELD DETERMINATION OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT OF SOILS BY ONE-POINT PROCTOR METHOD

SC-T-33 - FIELD DETERMINATION OF DENSITY AND MOISTURE CONTENT OF SOILS AND AGGREGATE BASES BY THE USE OF THE TROXLER 3401 SERIES NUCLEAR GAUGE

June 1, 2001

BASES AND SUBBASES QUALITY CONTROL/QUALITY ASSURANCE

DESCRIPTION: The Contractor is advised that the Quality Control Testing of Base and Subbase Compaction and other requirements defined in the tables below shall be performed by the Contractor as outlined in this provision and related documents. The Engineer will perform Quality Assurance Testing and other testing as required below. Except as revised in this provision, Contractor Base and subbase Quality Control shall be performed in accordance with the procedures outlined in the Standard Specifications and Construction Manual. Other construction testing requirements of this Proposal, the Standard Specifications (**AA**) and the Construction Manual (**CM**) shall remain unchanged.

Related test procedures are listed below:

SC-T- (1-5)	Methods of Sampling and Analyzing Aggregates
SC-T-21	Method of Sampling Soil Pits
SC-T-22	Determining Moisture Content of soils By Carbide Gas Method
SC-T-25	Field Method of Determining Moisture/Density Relationships of Soils
SC-T-29	Field Determination of Maximum Dry Density and Optimum Moisture Content of Soils by One-Point Proctor Method
SC-T-33	Field Determination of Density and Moisture Content of Soils and Aggregate Bases by the use of the Troxler 3401 Series Nuclear Gauge
SC-T-100	Random Method of Sampling
AASHTO T 99	Moisture-Density Relations of Soils Using a 5.5-Lb Rammer
AASHTO T134	Moisture-Density Relations of Soil Cement Mixtures
AASHTO T180D	Moisture-Density Relations of Soils Using a 10-Lb Rammer

Equipment: The Nuclear Density Gauge used shall be provided and operated by the Contractor and shall be of the Troxler 3400 series or equivalent. All equipment and personnel necessary to perform these tests shall be approved by the Department's Research and Materials Laboratory. The Contractor's off-site testing facilities shall be AASHTO certified for each testing procedure.

Documentation: *Lab Form 229* and other reports as required shall be completed by the Contractor and submitted to the Resident Engineer on a daily basis. Subsequent placement of material shall not proceed until the reports are received.

Deficient Areas: Deficient Areas as determined by the Contractor's or the Engineer's testing, shall be retested following corrective actions. Retested areas shall be indicated by an asterisk next to the Station Number certification and the description as a "Retest" in the remarks section of the form. Areas which do not attain required compaction and other defined requirements may be required to be reworked or removed and replaced at the discretion of the Engineer at no additional cost to the Department.

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Required Testing of Bases and Subbases <u>BY CONTRACTOR:</u> Quality Control Testing of Bases and Subbases shall be performed in accordance with the following table:

Section/ Type	TESTING BY	TEST PROCEDURES PERFORMED	FREQUENCY **	LOCATION OF TEST
305/ Graded Aggregate Base	**CONTRACTOR** (QUALITY CONTROL)	**AASHTO-T 180D** Maximum Density	Min. of 1 per source or when material conditions change. (For projects <2000 tons use SCDOT historical data – if available.)	Material samples shall be obtained within area of days work and representative of material placed
		SC-T-33 FIELD DENSITY	Each 1000' per 2 lanes, each layer	Random within 1000' section as determined from SC-T-100
		SC-T-(1-5) Gradation & requirements of sect. 305.05(**SS**)	Each 1000' per 2 lanes, each layer, sample per 305.13(**SS)**	Random within 1000' section as determined from SC-T-100
		Depth / Thickness	Staggered – each 250' per two lanes	Random within 250' section as determined from SC-T-100

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**** <u>More frequent testing may be required if placing materials in confined areas. The Engineer reserves the right to alter or increase the Department's testing frequency to insure adequate assurance of the Contractor's Quality Control program.</u>**

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 permanent pavement structure plus 18 inch beyond the longitudinal edge of the permanent pavement structure.** Except for the additional 18 inches beyond the permanent pavement structure, the area under existing pavement that remains in place, unpaved shoulders, driveways, curbs, gutters, sidewalks, multi-use paths, 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, subgrade 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 subgrade work for areas under previously existing pavement, 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.

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EROSION CONTROL MEASURES

In addition to the erosion control measures specified in the Plans, Standard Specifications, Supplemental Technical Specifications and 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 may be viewed at the following Internet web address

http://www.scstatehouse.gov/query.php?search=DOC&searchtext=63%20380&category=CODEOFREGS&conid=8484774&result_pos=0&keyval=212&numrows=10

- 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 may be viewed at the following Internet web address:

http://www.scstatehouse.gov/query.php?search=DOC&searchtext=Title%2048,%20Chapter%2018&category=CODEOFLAWS&conid=8484768&result_pos=0&keyval=7045&numrows=10

- National Pollutant Discharge Elimination System (NPDES) General Permit Number SCR100000, effective September 1, 2006: 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 following Internet web address:

http://www.scdhec.gov/environment/PermitCentral/FactSheetsNPDESPermitStormwater/

In accordance with the NPDES General Permit, sign a Co-Permittee Agreement and Contractor Certification statement (shown in Part 3.2D of the General Permit) and require all subcontractors performing land-disturbing activities to sign a Co-Permittee Agreement and Contractor Certification statement as part of their subcontract. These certifications are incorporated into the proposal form for the Contract. By signing either form, the Contractor acknowledges that upon award and execution of the Contract, he/she accepts/understands the terms and conditions of the *Storm Water Pollution Prevention Plan (SWPPP)* as required by the NPDES General Permit and may be legally accountable to SCDHEC for compliance with the terms and conditions of the *SWPPP*. In addition, the Contractor certifies that the NPDES certification statement and/or co-permittee status is made part of all its subcontracts.

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 *CECP* will take place, coverage will be automatically granted.

Prepare and submit a *Contractor's Erosion Control Plan (CECP)* to the RCE before the pre-construction conference. Ensure that the plan meets the requirements of the NPDES General Permit. The plan will be reviewed and approved by the Department before commencing any land disturbing activities.

At the pre-construction conference, with all contractors and subcontractors performing land-disturbing activities present, the CECP will be explained and discussed so that each contractor and subcontractor is made aware of their responsibilities in the *CECP*.

Once approved, fully implement the *CECP*. Coordinate the prompt installation of erosion control devices with construction activities to maintain compliance with the above regulations and NPDES General Permit.

Conduct an Erosion and Sediment Control Inspection by an appointed Certified Erosion Prevention and Sediment Control Inspector (CEPSCI) from the Contractor and the Department at least every 7-calendar days. Both parties will acknowledge participation in the inspection by signing the inspection report and include their inspector's CEPSCI number on the report. Correct deficiencies noted during these inspections within the assigned priority period. If deficiencies are not corrected within this timeframe, the RCE will 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 7 days or 48 hours in accordance with their assigned priority after being identified during the Erosion and Sediment Control Inspection.

Closely follow the grading operations with the seeding operations. Shape and prepare the slopes for seeding as the grading progresses. Unless the RCE grants prior written approval, limit the amount of surface area exposed by land disturbing activities to 750,000 square feet. Commence seeding operations within 7 days following completion of construction activities within an area.

Initiate stabilization measures within 7 days for an area where construction activities will be temporarily or permanently ceased for 21 days or longer.

Coordinate the installation of all other permanent erosion control items with the grading and seeding operations. These items include, but are not limited to, asphalt gutter and riprap. Construct gutter work before or promptly after the seeding is performed. Place riprap at the ends of pipe immediately after the pipe is laid and promptly install riprap ditch checks after ditch work has been performed.

Failure to adequately comply with the provisions as detailed above or any other required erosion control measures will 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.

Keep the following documents at the RCE's office from the start of construction until the site is finally stabilized:

- Copy of the *CECP*,
- Copies of all the co-permittee agreements and Contractor certification statements,
- Copy of the permit,
- Letter from DHEC authorizing permit coverage if provided by DHEC, and
- A marked-up set of site plans.

When uniform perennial vegetation achieves a cover density of 70%, submit a *Notice of Termination (NOT)* to SCDHEC to terminate coverage. Include a signed statement with the *NOT* certifying that all work on the site has been completed in accordance with the *SWPPP* and the NPDES General Permit for all sites one acre or greater.

> 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.

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Erosion Control

Section 815.2.5.1 Posts
Replace Section 815.2.5.1 in its entirety with the following:

Furnish steel posts a minimum of 60 inches long and meeting the nummum physical requirements specified in Subsection 815.2.12 or Furnish Rigid PVC T-posts a minimum of 60 inches long meeting the physical requirements specified in paragraph 3 of this subsection.

When sandy soils are present on site and steel posts are utilized, provide a metal plate welded
near the bottom of the steel post so that when the post is driven to the proper depth, the plate is below the ground level for added stability. In areas where conditions warrant, larger posts or reduced post spacing may be required to provide an adequate fence to handle the stress from sediment loading.

Rigid PVC T -posts shall meet the following physical requirements. Material shall consist of Rigid Polyvinyl Chloride with cell classification of 30304311 as determined in accordance with ASTM D4216. Width of the flange shall be a minimum of 2.1". Depth of the web shall be a minimum of 1.625". The thickness of the flange and the thickness of the web shall each be a minimum of 0.35" at the intersection of the flange and web. Weight per unit length shall be no less than 0.8Ib/ft. Posts shall have only a single 3/8" hole in the center of the web spaced every 3" in the top 3' of the post. No holes shall be present on any part of the flange. Silt fence shall be placed directly against the flange of the post, with the flange parallel to the run of silt fence. In areas where conditions warrant, reduced post spacing may be required to provide an adequate fence to handle the stress from sediment loading.

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GEOTEXTILE FOR DRAINAGE FILTRATION

I. ACCEPTANCE: The Contractor shall supply to the Resident Engineer, prior to placing the material, certified test results from a recognized laboratory of those tests specified herein. Acceptance will be based on the test results meeting these requirements[1] and the material meeting all stated specifications.
The Resident Engineer shall submit the certified test results to the Research and Material Engineer for
acceptance. Test data shall be no more than 1 year old at the time it is furnished to. the Department. Once a fabric has been accepted, it will be listed on an Approval Sheet, and only those materials listed will be acceptable. Test data must be resubmitted for reapproval every 2 years. No fabric will be used nor will payment be made for fabric until the fabric certification is received and approved by the Research and Materials Engineer. The Department reserves the right to sample and test any of the fabrics, or other materials used in drainage filtration, at any time.

II. PIPING RESISTANCE: (soil retention- all applications)

A. Soils with 50% or less particles by weight passing U.S. No. 200 sieve:

EOS No. (fabric) C 30 U.S. Std. Sieve No.

B. Soils with more than 50% particles by weight passing U.S. No. 200 sieve:

EOS No. (fabric) C 50 U.S. Std. Sieve No.

Note:

a. Whenever possible, fabric with the lowest possible EOS No. should be specified.

b. When the protected soil contains particles from 1 inch size to those passing the U.S. No. 200 sieve, use only the gradation of soil passing the U.S. No.4 sieve in selecting the fabric.

Ill. PERMEABILITY:

Critical / Severe Applications*	Normal Applications
k (fabric) C 10 k (soil)[2]	*k (fabric) C k (soil)*

*Woven monofilament fabrics only: percent open area;:::4.0 and EOS No.::; 100 sieve

IV. CHEMICAL COMPOSITION REQUIREMENTS/CONSIDERATIONS:

A. Fibers used in the manufacture of civil engineering fabrics shall consist of long chain synthetic polymers, composed of at least 85% by weight of polyolefins, polyesters, or polyamides. These fabrics shall resist deterioration from ultraviolet exposure.

B. The engineering fabric shall be exposed to ultraviolet radiation (sunlight) for no more than 30 days total in the period of time following manufacture until the fabric is covered with soil, rock, concrete, etc.

	Class 1 Fabric Protected	Class 2 Fabric;:) Unprotected
Grab Strength (ASTM D-4632 or ASTM D-1682)	80 lbs.	180 lbs.
Seam Strength[4] (ASTM D-4632 or ASTM D-1682)	70 lbs.	160 lbs.
Puncture Strength (ASTM D-3787)	251bs.	80 lbs.
Burst Strength (ASTM D-3786)	130 psi.	290 psi.
Trapezoid Team (ASTM D-4533)	251bs.	50 lbs.
Ultraviolet Degradation at 150 hours (ASTM D-4355)	70%	70%

1. All numerical values represent minimum average roll values (i.e., any roll in a lot should meet or exceed the minimum values in the table). Use values for the weaker principal direction. Lots should be sampled according to ASTM D-4354.

2 Permeability should be based on the actual fabric open area available for flow. For example, if 50% of the fabric area is to be covered by flat concrete blocks, the effective flow area is reduced by 50%.

3 Fabric is said to be protected when used in drainage trenches or beneath/behind concrete (Portland or asphalt cement) slabs. All other conditions are said to be unprotected,

Examples of each condition are:

Protected: highway edge drains, blanket drains, smooth stable trenches < 10 feet in depth. In trenches, in which the aggregate is extra sharp, additional puncture resistance may be necessary.

Unprotected: stabilization trenches, interceptor drains on cut slopes, rocky or caving trenches or smooth stable trenches> 10 feet in depth.

4 Values apply to both field and manufactured seams.

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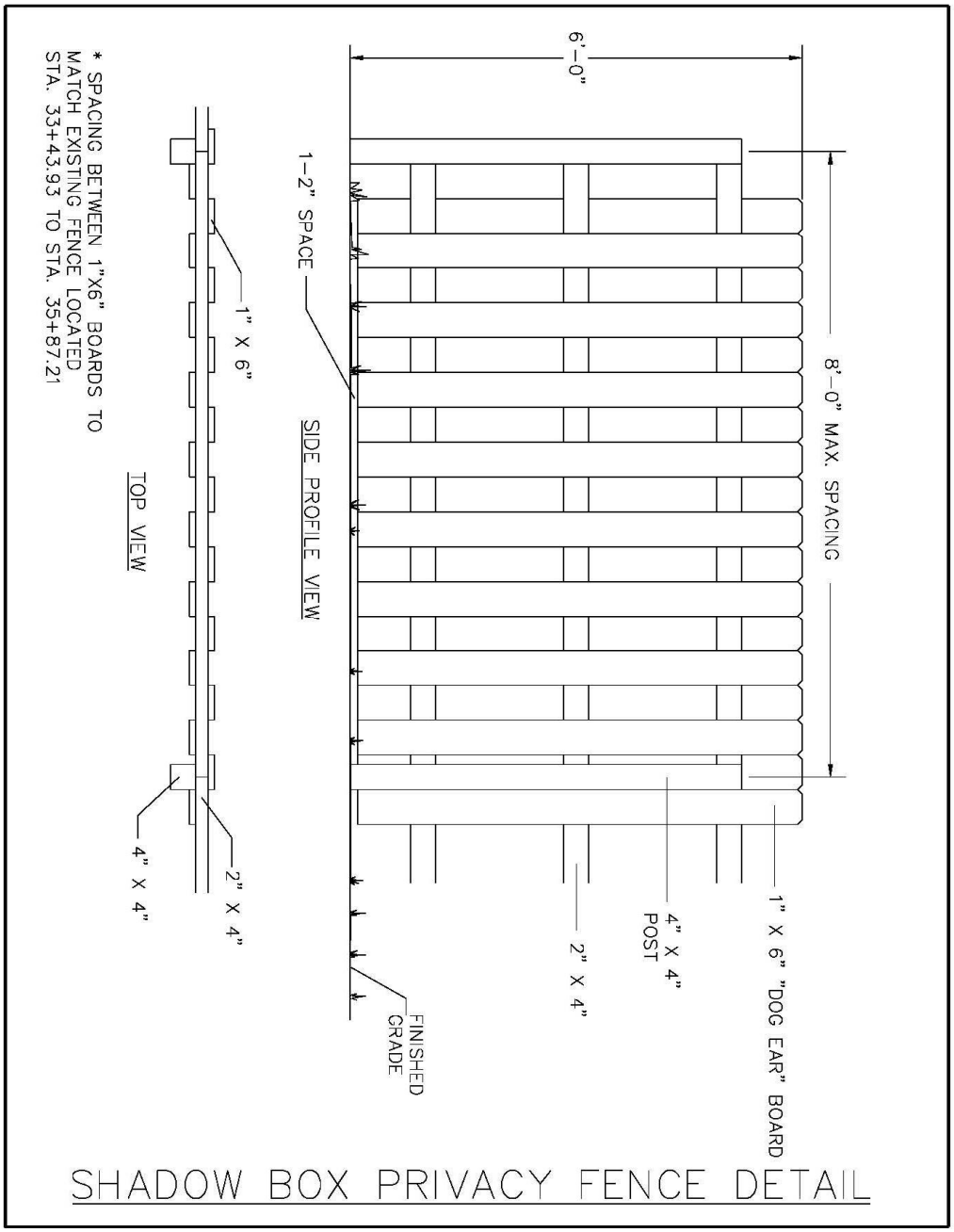
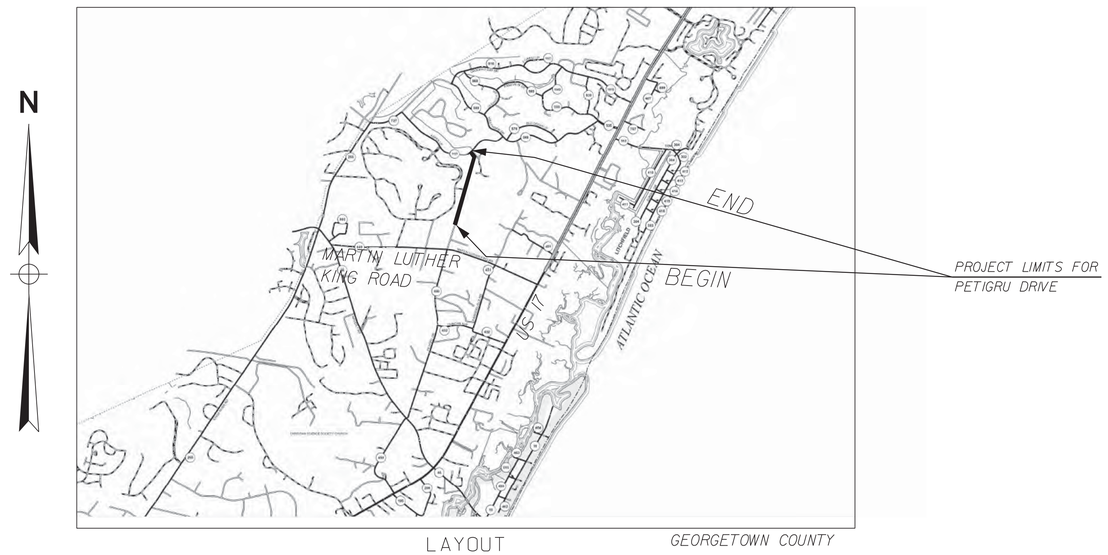
Privacy Fence Detail

Where tying to existing privacy fences that are to remain, contractor shall match the board spacing of the existing fence. For the areas where an existing fence is not present, the spacing below shall be used.



STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	ROUTE NO.	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE		01	47

GEORGETOWN COUNTY DEPARTMENT OF PUBLIC SERVICES
DIVISION OF PUBLIC WORKS
ENGINEERED PAVING IMPROVEMENT PROJECTS
PLAN OF PROPOSED IMPROVEMENTS PETIGRU DRIVE



LAYOUT
1" = 2640'

NPDES PERMIT INFORMATION
NPDES Disturbed Area = 3.72 Acres
Approximate Location of Roadway is: Longitude 79°21'23.06"W Latitude 33°32'03.01"N
Hydrology and NPDES Design provided by: Davis & Floyd

NET LENGTH OF ROADWAY	0.523	MILES
NET LENGTH OF OUTFALL	0.000	MILES
NET LENGTH OF PROJECT	0.523	MILES
LENGTH OF EXCEPTIONS	0.000	MILES
GROSS LENGTH OF PROJECT	0.523	MILES

NOTE: ALL WORKMANSHIP AND MATERIAL ON THIS PROJECT TO CONFORM WITH SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2007 EDITION). AND BOOK OF STANDARD DRAWINGS FOR ROAD CONSTRUCTION.

RAILROAD INVOLVEMENT?
YES / (NO)

INDEX OF SHEETS

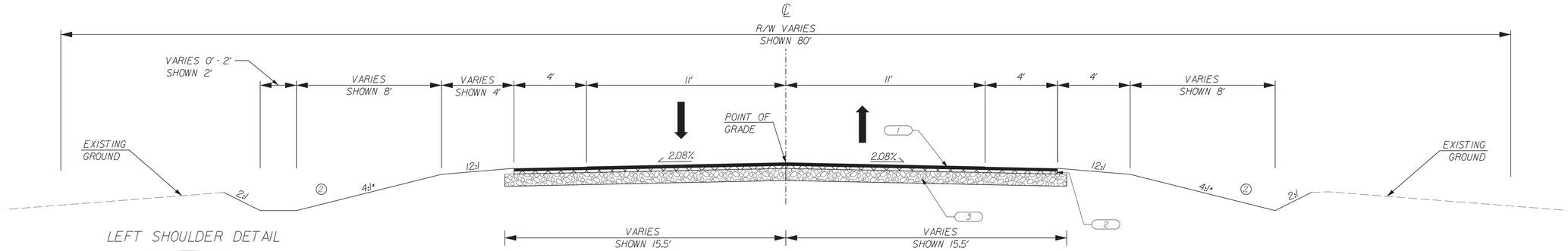
SHEET #	DESCRIPTION	SHEET TOTALS
01	TITLE SHEET	1
03 - 03B	TYPICAL	3
05	GENERAL CONSTRUCTION NOTES	1
05A	REFERENCE SHEET	1
06 - 11	PLAN AND PROFILE SHEETS	6
PM1 - PM3	PAVEMENT MARKING SHEETS	3
EC01	EROSION CONTROL SHEETS	1
X1 - X22	CROSS SECTIONS	22
D01 - D07	DETAIL SHEETS	7
	TOTAL SHEETS	45

CONSULTING ENGINEERING FIRM	CONSULTANT - PROJECT ENGINEER
SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION	REGISTERED PROFESSIONAL ENGINEER SOUTH CAROLINA No. 20214 GEORGE TILLEY BLACK

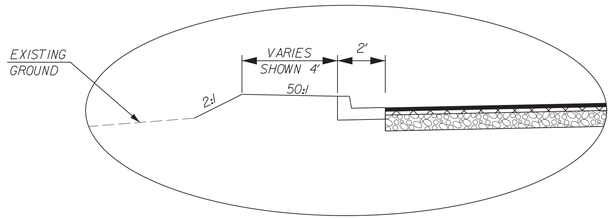
FOR CONSTRUCTION : April 16, 2018
DATE

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	03	

TYPICAL SECTION
PETIGRU DRIVE
GEORGETOWN COUNTY



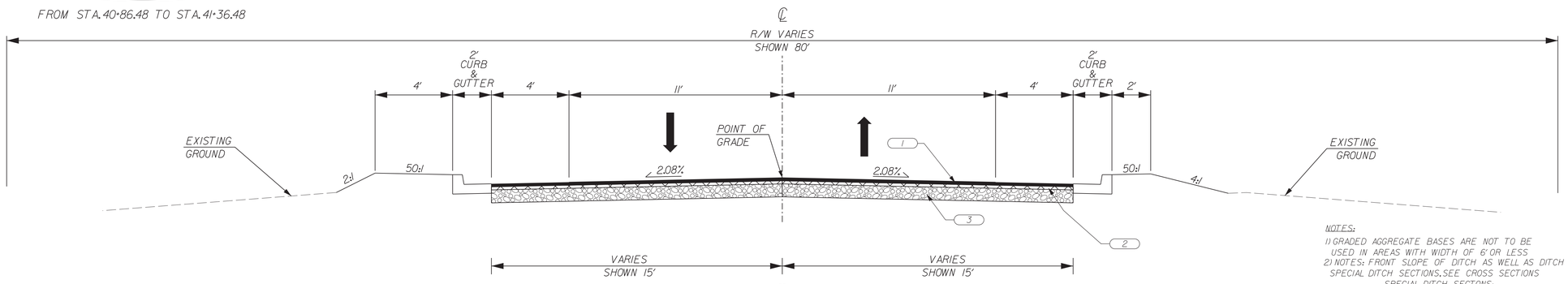
LEFT SHOULDER DETAIL



FROM STA. 40+86.48 TO STA. 41+36.48

1

PETIGRU DRIVE
TYPICAL SECTION
STA. 20+37.23 TO STA. 24+50.00 RIGHT
STA. 20+37.23 TO STA. 24+50.00 LEFT
STA. 36+50.00 TO STA. 45+12.76 RIGHT
STA. 36+50.00 TO STA. 45+12.76 LEFT



2

PETIGRU DRIVE
TYPICAL SECTION
STA. 24+50.00 TO STA. 26+50.00 RIGHT
STA. 24+50.00 TO STA. 26+50.00 LEFT

NOTES:

1) GRADED AGGREGATE BASES ARE NOT TO BE USED IN AREAS WITH WIDTH OF 6' OR LESS
2) NOTES: FRONT SLOPE OF DITCH AS WELL AS DITCH BOTTOM WIDTH VARIES IN SPECIAL DITCH SECTIONS. SEE CROSS SECTIONS
   SPECIAL DITCH SECTONS:
   LEFT: STA. 20+50.00 TO STA. 24+95.31
   STA. 31+00.00 TO STA. 32+50.00
   STA. 34+00.00 TO STA. 38+00.00
   STA. 41+50.00 TO STA. 45+00.00
   RIGHT: STA. 20+50.00 TO STA. 23+75.00
   STA. 34+35.53 TO STA. 45+00.00
3) SEE CROSS SECTIONS FOR VARIABLE DITCH WIDTHS
4) GUARDRAIL TO BE INSTALLED WITH FACE OF GUARDRAIL AT BACK OF CURB. 6' PRIVACY FENCE TO BE INSTALLED 2' BEHIND BACK OF GUARDRAIL. SEE PLANS AND CROSS SECTIONS FOR MORE INFORMATION
5) PAVING UNDER GUARDRAIL BEHIND BACK OF CURB TO BE 4" THICK CONCRETE
6) SEE DETAIL FOR PAVING UNDER GUARDRAIL FOR MORE INFORMATION

PAVEMENT DESIGN

1		175 *//SY HOT MIX ASPHALT SURFACE TYPE C
2		200*//SY HOT MIX ASPHALT INTERMEDIATE COURSE TYPE C
3		6" GRADED AGGREGATE BASE

RTE. PETIGRU DRIVE DESIGN SPEED		
MPH	FROM STA.	TO STA.
30	20+37.23	47+89.89
EXCEPTIONS TO DESIGN SPEED		

SOUTH CAROLINA
DAVIS & FLOYD, INC.
No. C00538
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 20214
4/3/2018
GEORGE TILLEY BULL

DAVIS & FLOYD

SINCE 1954

WWW.DAVISFLOYD.COM

3229 W. MONTAGUE AVENUE
NORTH CHARLESTON, SC 29418
(843) 554-8102

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DGN. AMS DATE
R/W DATE
CHK. GTB DATE

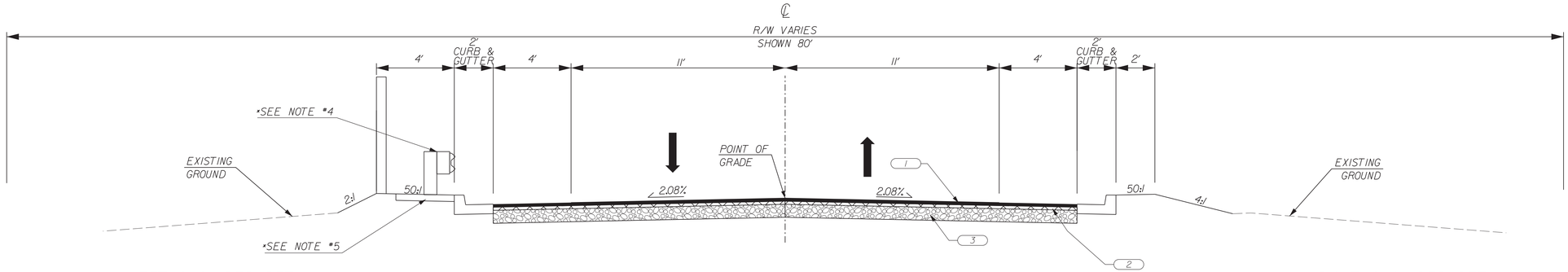
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
TYPICAL SECTION

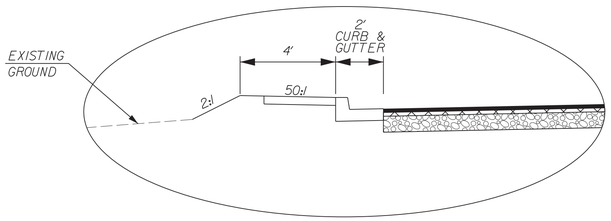
NTS

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	03A	

TYPICAL SECTION
PETIGRU DRIVE
GEORGETOWN COUNTY



LEFT SHOULDER DETAIL

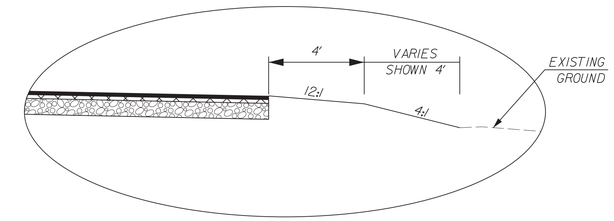


FROM STA. 30+00.00 TO STA. 31+89.96

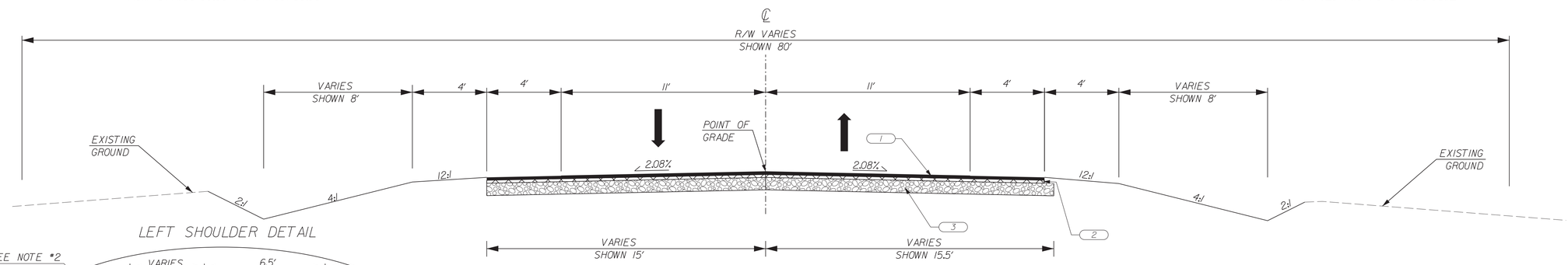
③

PETIGRU DRIVE
TYPICAL SECTION
STA. 26+50.00 TO STA. 29+41.16 RIGHT
STA. 26+50.00 TO STA. 30+00.00 LEFT

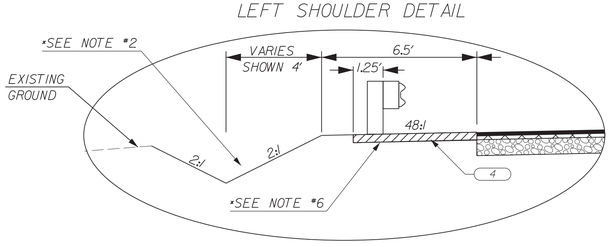
RIGHT SHOULDER DETAIL



FROM STA. 29+41.16 TO STA. 30+95.12



LEFT SHOULDER DETAIL



FROM STA. 33+44.52 TO STA. 36+44.52

④

PETIGRU DRIVE
TYPICAL SECTION
STA. 30+95.12 TO STA. 36+50.00 RIGHT
STA. 31+89.96 TO STA. 33+44.52 LEFT

RTE. PETIGRU DRIVE DESIGN SPEED		
MPH	FROM STA.	TO STA.
30	20+37.23	47+89.89
EXCEPTIONS TO DESIGN SPEED		

	PAVEMENT DESIGN
1	175 #/SY HOT MIX ASPHALT SURFACE TYPE C
2	200#/SY HOT MIX ASPHALT INTERMEDIATE COURSE TYPE C
3	6" GRADED AGGREGATE BASE
4	420 #/SY HOT MIX ASPHALT SURFACE TYPE C

NOTES:

1) GRADED AGGREGATE BASES ARE NOT TO BE USED IN AREAS WITH WIDTH OF 6' OR LESS
2) NOTES: FRONT SLOPE OF DITCH AS WELL AS DITCH BOTTOM WIDTH VARIES IN SPECIAL DITCH SECTIONS. SEE CROSS SECTIONS
   SPECIAL DITCH SECTIONS:
   LEFT: STA. 20+50.00 TO STA. 24+95.31
   STA. 31+00.00 TO STA. 32+50.00
   STA. 34+00.00 TO STA. 38+00.00
   STA. 41+50.00 TO STA. 45+00.00
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   STA. 34+35.53 TO STA. 45+00.00
3) SEE CROSS SECTIONS FOR VARIABLE DITCH WIDTHS
4) GUARDRAIL TO BE INSTALLED WITH FACE OF GUARDRAIL AT BACK OF CURB. 6' PRIVACY FENCE TO BE INSTALLED 2' BEHIND BACK OF GUARDRAIL. SEE PLANS AND CROSS SECTIONS FOR MORE INFORMATION
5) PAVING UNDER GUARDRAIL BEHIND BACK OF CURB TO BE 4" CLASS 2500 PORTLAND CEMENT
6) SEE DETAIL D07 FOR PAVING UNDER GUARDRAIL FOR MORE INFORMATION

SOUTH CAROLINA PROFESSIONAL ENGINEERING ORGANIZATION
DAVIS & FLOYD, INC.
No. C00538
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 20214
4/16/18
GEORGE TILLEY BULL

DAVIS & FLOYD
SINCE 1954
WWW.DAVISFLOYD.COM

3229 W. MONTAGUE AVENUE
NORTH CHARLESTON, SC 29418
(843) 554-9802

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DGN. AMS DATE
R/W DATE
CHK. GTB DATE

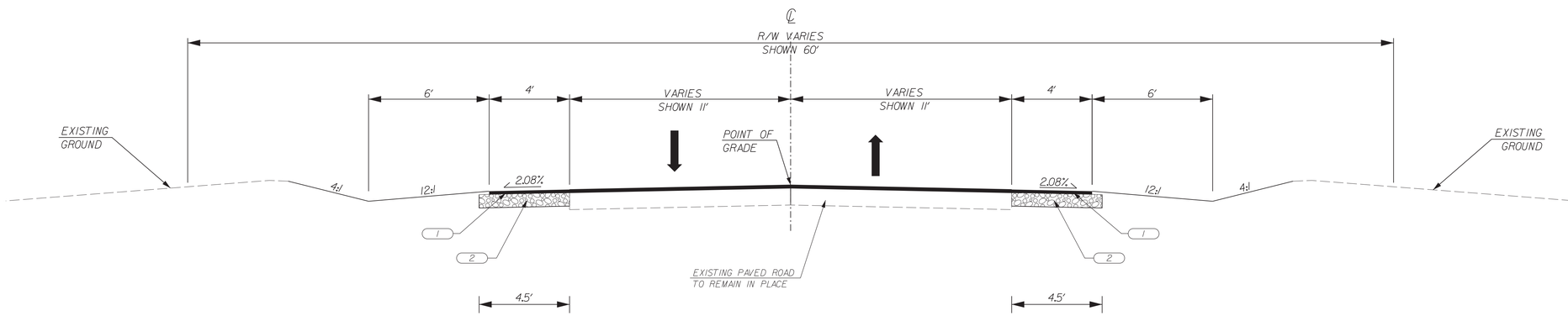
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
TYPICAL SECTION

NTS

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	03B	

TYPICAL SECTION
PETIGRU DRIVE
GEORGETOWN COUNTY



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PETIGRU DRIVE
TYPICAL SECTION
STA. 45+12.76 TO STA. 47+89.89

PAVEMENT DESIGN

1		175 #/SY HOT MIX ASPHALT SURFACE TYPE C
2		450 #/SY HOT MIX ASPHALT BASE TYPE B

NOTE: GRADED AGGREGATE BASES ARE NOT TO BE USED IN AREAS WITH WIDTH OF 6' OR LESS

RTE. PETIGRU DRIVE DESIGN SPEED		
MPH	FROM STA.	TO STA.
30	20+37.23	47+89.89
EXCEPTIONS TO DESIGN SPEED		

SOUTH CAROLINA
DAVIS & FLOYD, INC.
No. C00538
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 20214
4/3/2018
GEORGE TILLEY BULL

DAVIS & FLOYD

SINCE 1954

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(843) 554-8102

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DGN. AMS DATE
R/W DATE
CHK. GTB DATE

GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
TYPICAL SECTION

NTS

GENERAL CONSTRUCTION NOTES:

THE CONTRACTOR MUST PERFORM ALL WORK IN ACCORDANCE WITH THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS FOR ROAD CONSTRUCTION (LATEST EDITION), SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION), SCDOT TRAFFIC SIGNAL SPECIFICATIONS, AND THE MUTCD, 2009 EDITION.

THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES TO PREVENT THE TRANSFER OF SUSPENDED SOLIDS AND/OR CHEMICAL SOLUTIONS OFF-SITE, AND TO PREVENT EXCESSIVE SILTATION OF EXISTING DRAINAGE PIPES, CULVERTS, AND DITCHES. THE CONTRACTOR SHALL ROUTINELY INSPECT AND MAINTAIN THESE DEVICES. ALL CHECK DAMS AND RIPRAP SHOWN ARE CLASS B UNLESS OTHERWISE STATED.

THE LOCATIONS OF EXISTING UTILITIES AND STORM DRAINAGE FACILITIES SHOWN ON THE PLANS ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE UTILITIES INFORMATION SHOWN ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL UTILITIES BEFORE CONSTRUCTION. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THAT THE PROPER COORDINATION WITH THE VARIOUS UTILITY OWNERS HAS BEEN PERFORMED. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY DURING RELOCATION OPERATIONS.

THE LOCATION OF UTILITIES SHOWN IN THE PLANS SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS DESIGNATED BY A TEST HOLE. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, STORM DRAINS, UTILITIES AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR OR COORDINATE WITH UTILITY OWNERS TO REPAIR ANY DAMAGES DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.

THE CONTRACTOR SHALL NOT STORE ANY MATERIALS OR EQUIPMENT WITHIN 5 FT OF THE EDGE OF TRAVEL WAY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN PERMISSION TO STORE EQUIPMENT ON ADJACENT PROPERTIES.

PIPE LENGTHS THAT ARE SHOWN ON THE PLANS ARE ROUNDED TO THE NEAREST 1' INCREMENT AND CALCULATED ALONG THE PIPE SLOPE FROM CENTER OF BOX TO CENTER OF BOX. FIELD ADJUSTMENTS OF THE ACTUAL PIPE LENGTHS MAY BE NECESSARY.

ANY COSTS ASSOCIATED WITH REMOVING EXISTING PIPE SHALL BE INCLUDED IN THE COST OF PLACING NEW PIPE.

FINAL SURFACE COURSE ON ALL ROADWAYS SHALL NOT BE PLACED UNTIL ALL DRAINAGE AND CURB AND GUTTER INSTALLATIONS ARE COMPLETE.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN PROPER DEWATERING PROCEDURES TO PREVENT THE FLOW AND ACCUMULATION OF SURFACE AND GROUND WATER IN EXCAVATED AREAS. ALL OF THE WATER PUMPED OR DRAINED SHALL BE DISPOSED OF WITHOUT UNDUE INTERFERENCE WITH OTHER WORK OR DAMAGE TO PAVEMENTS AND OTHER SURFACES OR PROPERTY. DISCHARGED WATER FROM ALL DEWATERING OPERATIONS SHALL BE FILTERED IN ACCORDANCE WITH SCDHEC OR OCRM REGULATIONS OR AS APPROVED BY THE ENGINEER. A PLAN FOR DEWATERING SHALL BE SUBMITTED TO THE RESIDENT CONSTRUCTION ENGINEER AND OCRM FOR APPROVAL PRIOR TO ANY WORK BEING PERFORMED WHERE DEWATERING IS REQUIRED. ONCE APPROVED AN ADDITIONAL COPY OF THE PLAN SHOULD BE PROVIDED TO GEORGETOWN COUNTY PUBLIC WORKS.

THE CONTRACTOR SHALL PROVIDE A DETAILED CONTRACTOR'S EROSION CONTROL PLAN TO THE RESIDENT CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO COMMENCING ANY WORK ON THE PROJECT.

THE CONTRACTOR SHALL PROVIDE A DETAILED TRAFFIC CONTROL PLAN TO THE RESIDENT CONSTRUCTION MANAGER FOR APPROVAL BEFORE STARTING ANY WORK ON THE PROJECT. THIS PLAN SHALL INCLUDE DETAILS CONCERNING PLACEMENT OF REFLECTORIZED BARRELS, CONES, AND/OR TYPE 2 BARRICADES IN ACCORDANCE WITH THE 2009 MUTCD.

THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING, AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES AND UTILITIES OR TO MINIMIZE TRENCH WIDTH AS REQUIRED. PAYMENT FOR SUCH MEASURES IS INCLUDED IN THE BID PRICE FOR THE ITEM BEING CONSTRUCTED.

WHERE STORM PIPES AND STRUCTURES ARE IDENTIFIED TO BE ABANDONED IN PLACE, THE FOLLOWING PROCEDURES SHALL BE UTILIZED:

PIPES: PLUG END(S) WITH BRICK AND GROUT.
STRUCTURES: REMOVE RIM/COVER AND CONE OR TOP SLAB.
PLUG PIPE OPENINGS WITH BRICK AND GROUT.
FILL STRUCTURE WITH FLOWABLE FILL TO BOTTOM OF PAVEMENT SECTION.
TEMPORARY ASPHALT IF NEEDED.

ANY COSTS ASSOCIATED WITH ABANDONING PIPES OR STRUCTURES SHALL BE INCLUDED IN THE COST OF PLACING NEW PIPE OR STRUCTURES ACCORDINGLY.

PAVE ALL DRIVEWAYS TO R/W LINE. UNLESS THE DRIVEWAY IS LABELED, THE STANDARD DRIVEWAY RADIUS IS 10'. THIS MAY BE MODIFIED PER DIRECTION OF THE ENGINEER TO FIT FIELD CONDITIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS SHOWN ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING CONSTRUCTION.

THE ENGINEER RESERVES THE RIGHT TO ADJUST THE LOCATION OF ALL PROPOSED IMPROVEMENTS TO MEET FIELD CONDITIONS IF NECESSARY.

STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

ALL DISTURBED AREAS SHALL BE SEEDED AFTER GRADING IS COMPLETE OR WITHIN 7 DAYS AFTER WORK STOPS IN AN AREA UNLESS WORK IS TO RESUME IN THAT AREA IN LESS THAN 21 DAYS.

NOTE:
1. SEE SCDOT STANDARD DRAWING NO. 625-305-00 FOR PAVEMENT MARKING DETAILS.

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20214 4/3/2018 GEORGE TILLEY BULL

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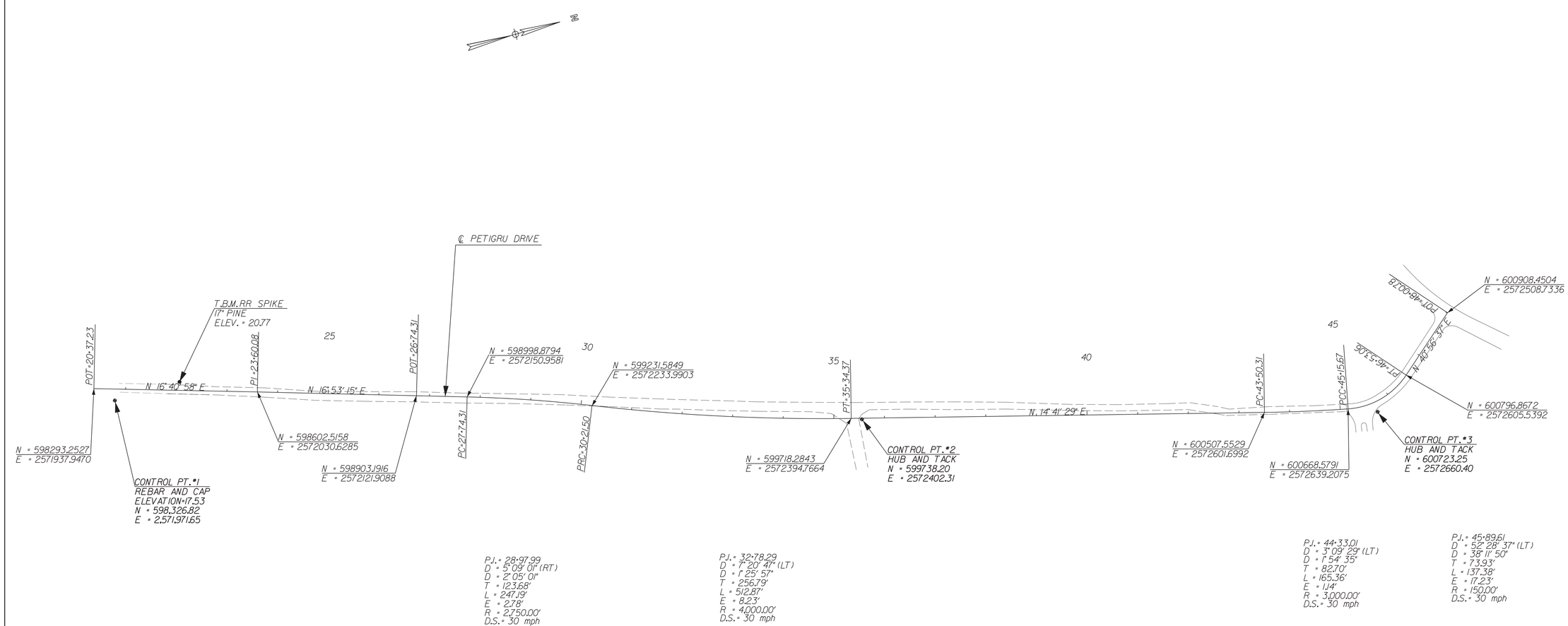
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
GENERAL CONSTRUCTION NOTES

NTS

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	5A	



SOUTH CAROLINA
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SOUTH CAROLINA
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04/3/2018
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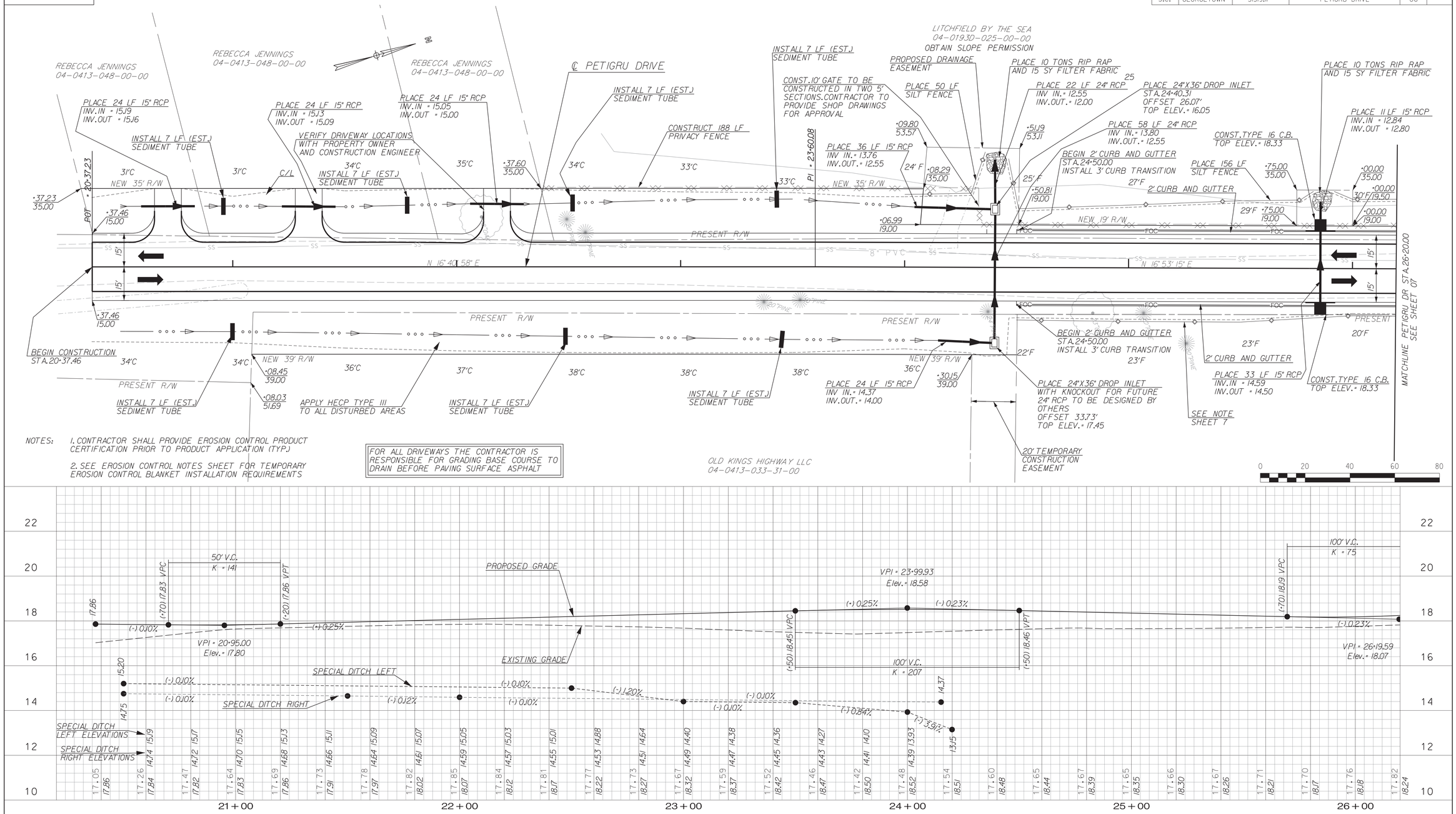
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
REFERENCE SHEET

SCALE 1"= 100'

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	06	



NOTES:

1. CONTRACTOR SHALL PROVIDE EROSION CONTROL PRODUCT CERTIFICATION PRIOR TO PRODUCT APPLICATION (TYP.)

2. SEE EROSION CONTROL NOTES SHEET FOR TEMPORARY EROSION CONTROL BLANKET INSTALLATION REQUIREMENTS

FOR ALL DRIVEWAYS THE CONTRACTOR IS RESPONSIBLE FOR GRADING BASE COURSE TO DRAIN BEFORE PAVING SURFACE ASPHALT

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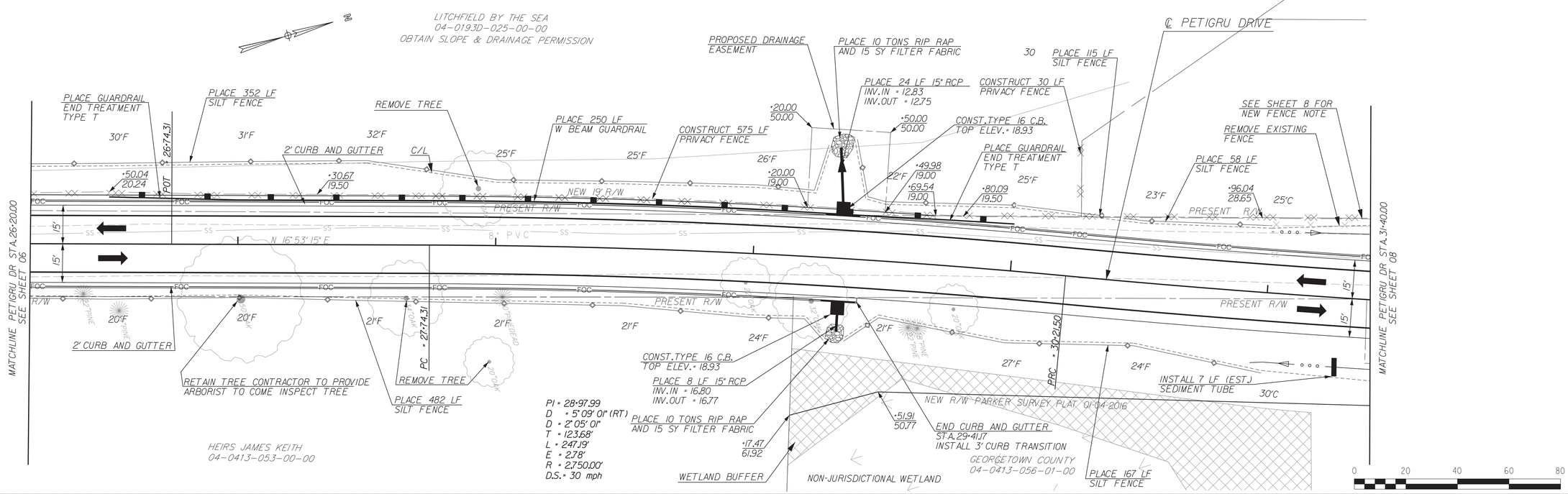
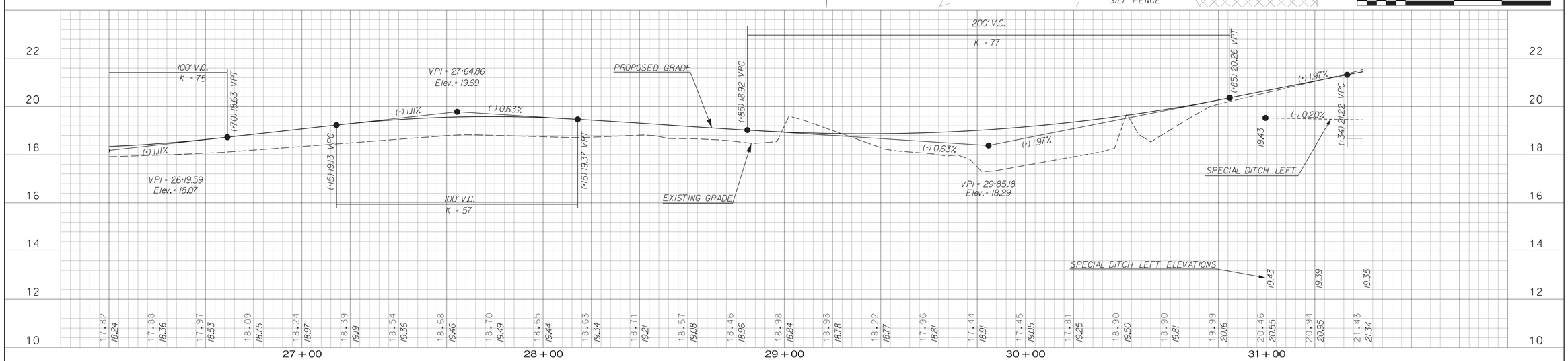
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
PLAN AND PROFILE SHEET

SCALE 1" = 20' HOR. 1" = 2' VER.

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	07	





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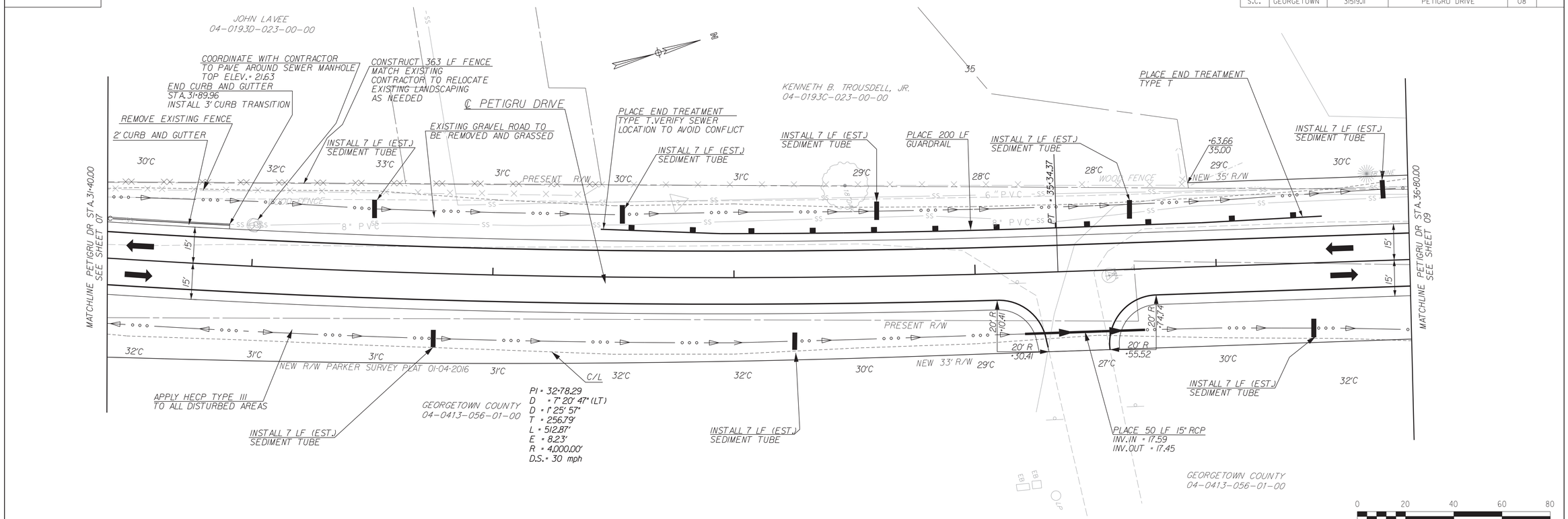
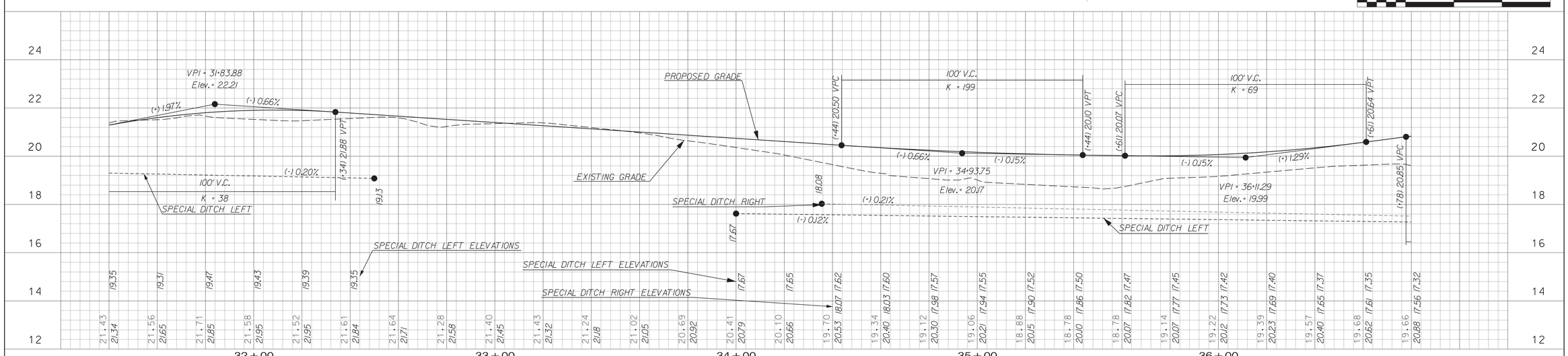
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
PLAN AND PROFILE SHEET

SCALE 1"= 20' HOR. 1" = 2' VER.

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	08	





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SOUTH CAROLINA PROFESSIONAL ENGINEER 24/3/2018 GEORGE TILLEY BALL

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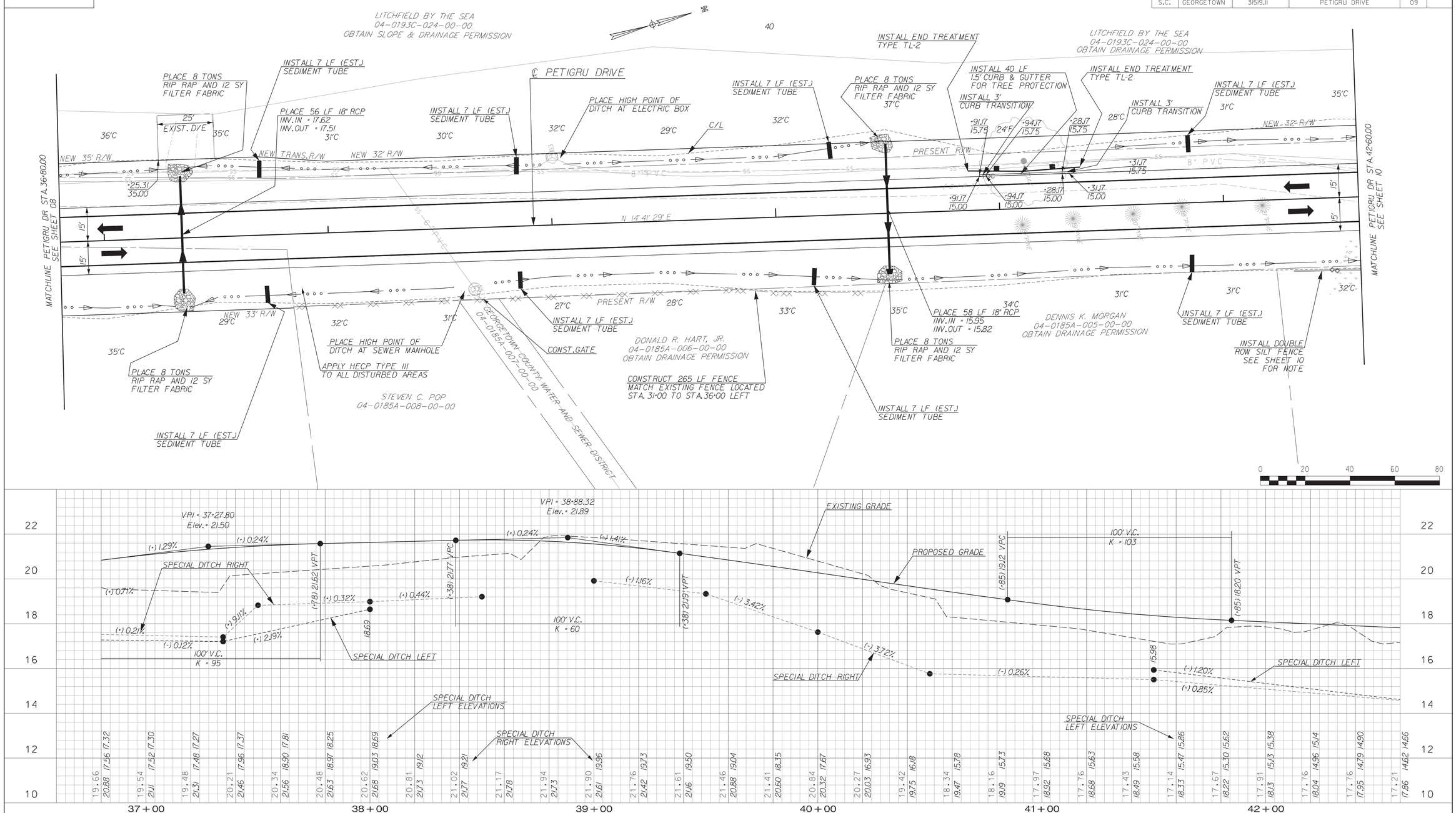
GEORGETOWN COUNTY ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
PLAN AND PROFILE SHEET

SCALE 1"= 20' HOR. 1" = 2' VER.

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	09	



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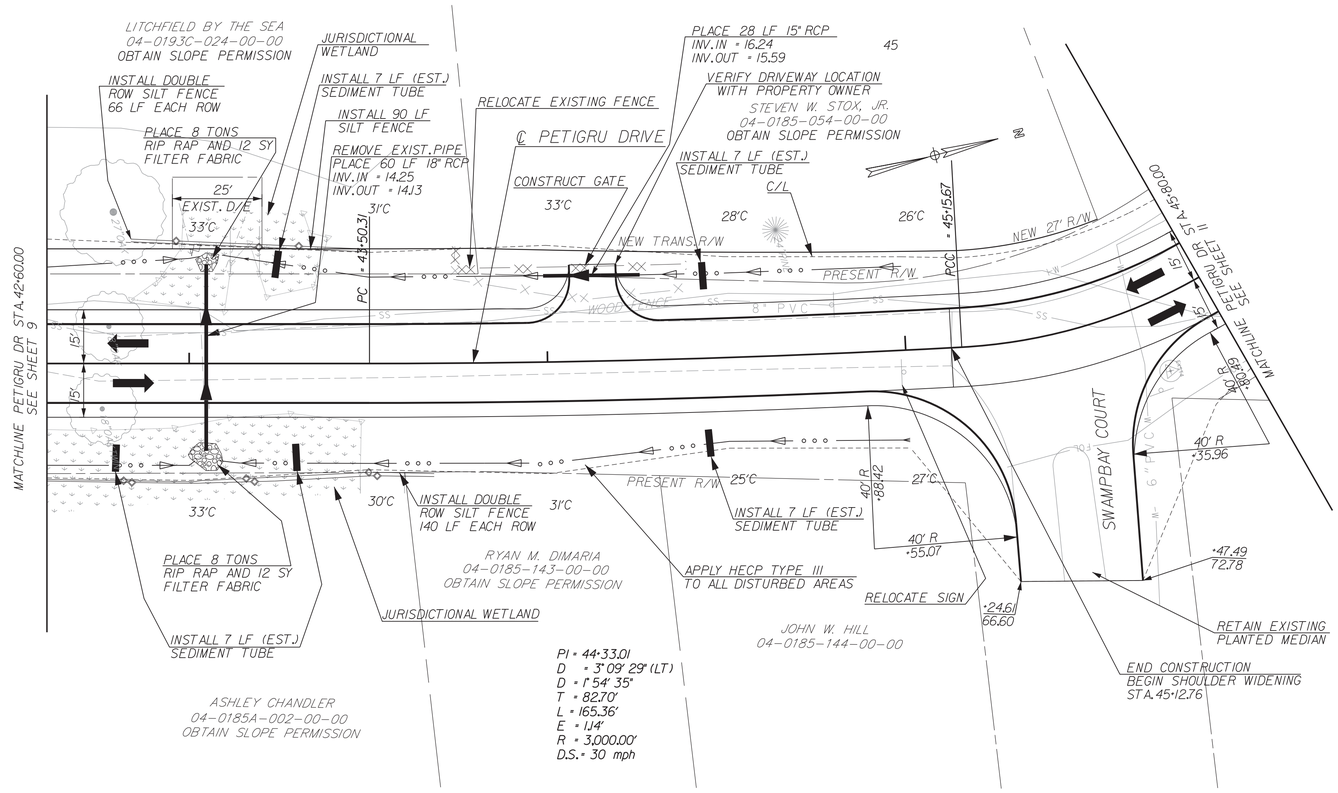
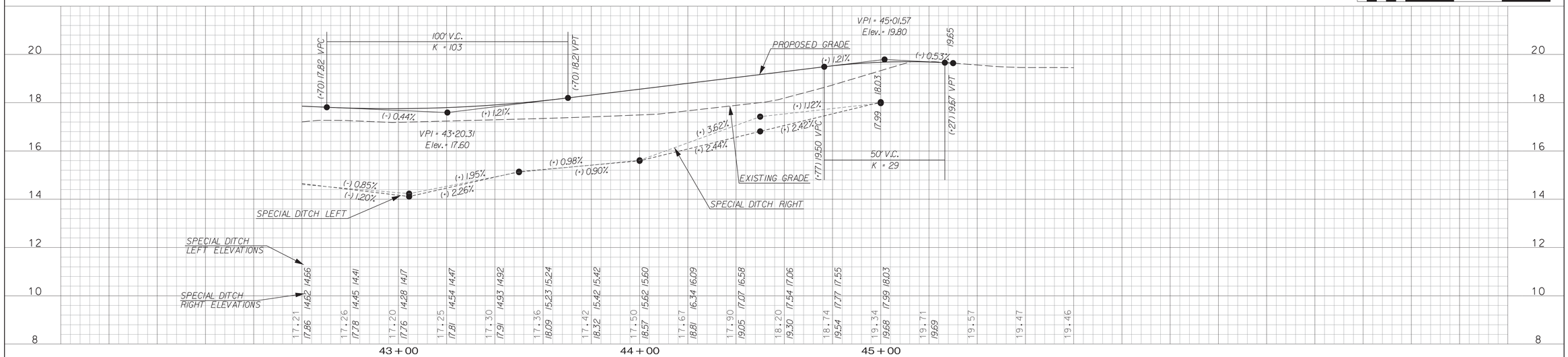
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
PLAN AND PROFILE SHEET

SCALE 1" = 20' HOR. 1" = 2' VER.

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	10	





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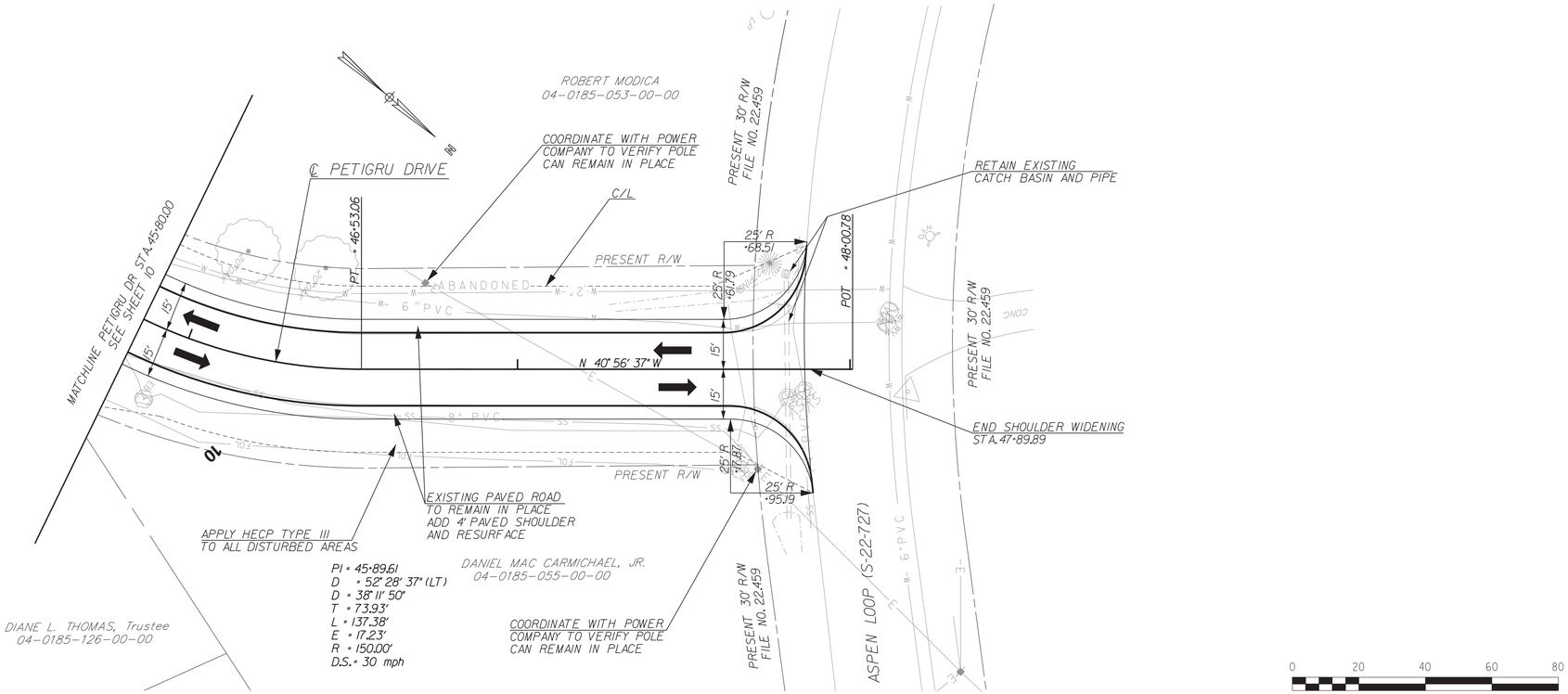
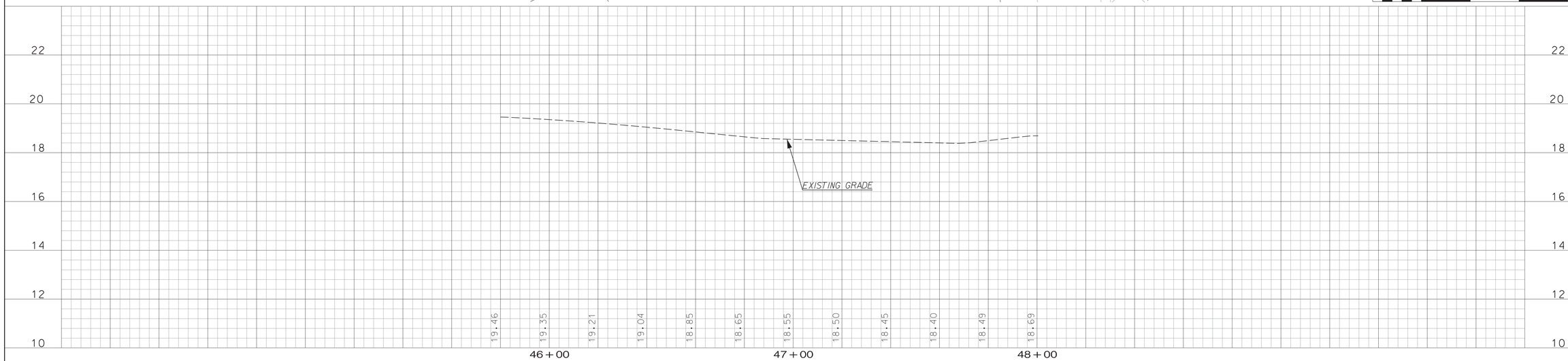
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
PLAN AND PROFILE SHEET

SCALE 1" = 20' HOR. 1" = 2' VER.

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	11	





DAVIS & FLOYD, INC. No. C00538 — CERTIFICATE OF AUTHORIZATION — SOUTH CAROLINA

SOUTH CAROLINA PROFESSIONAL ENGINEER — GEORGE TILLEY BULL — 24/3/2018

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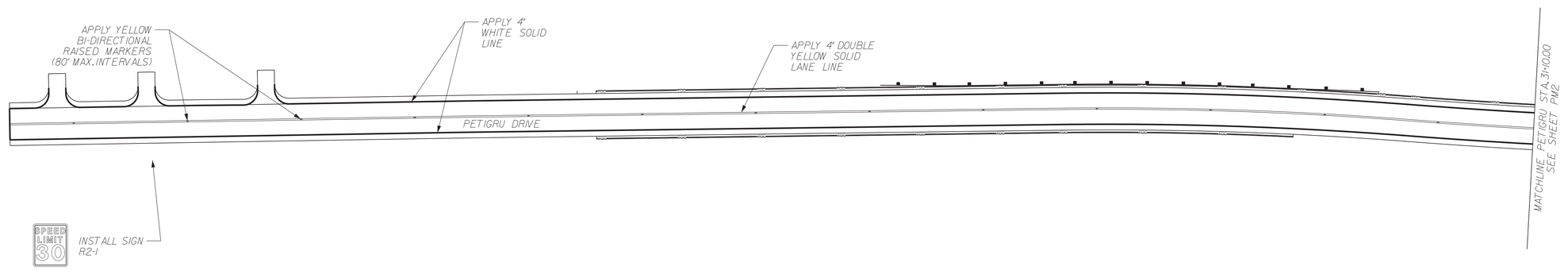
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
PLAN AND PROFILE SHEET

SCALE 1" = 20' HOR. 1" = 2' VER.

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	PM1	



DAVIS & FLOYD, INC. SOUTH CAROLINA No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20014 GEORGE TILLEY BULL 4/13/18

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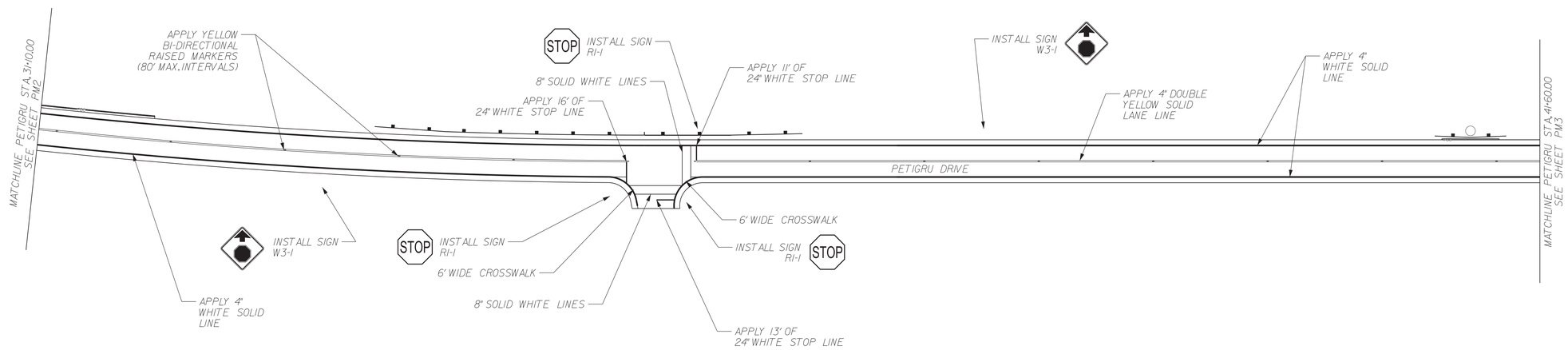
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE

SIGNING AND PAVEMENT MARKING PLAN SHEET

SCALE 1"= 40'

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	PM2	



DAVIS & FLOYD, INC.
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SOUTH CAROLINA

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
4/16/18
No. 20214
GEORGE TILLEY BOHAN

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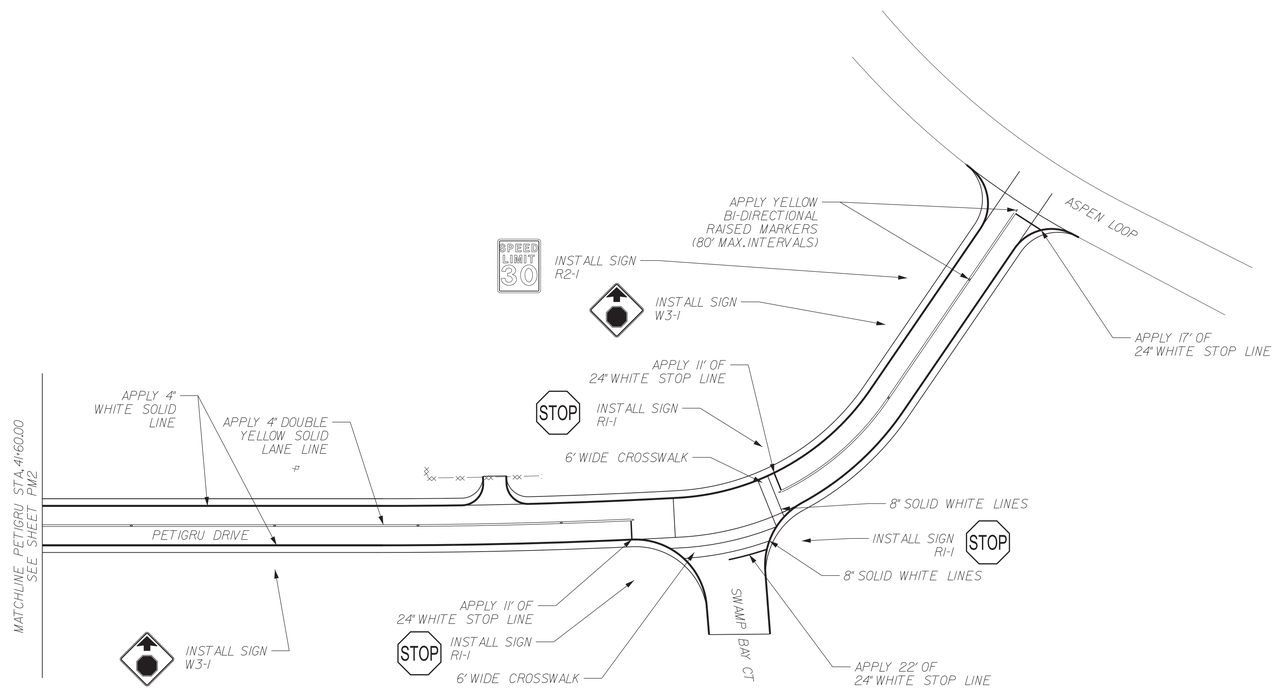
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE

SIGNING AND PAVEMENT MARKING PLAN SHEET

SCALE 1"= 40'

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	PM3	



SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER 4/16/18 No. 20214 GEORGE TILLEY BUTLER

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GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE

SIGNING AND PAVEMENT MARKING PLAN SHEET

SCALE 1"= 40'

SEEDING INSTALLATION

A. Seed all disturbed areas of construction (excluding riprap lined ditches).

B. No seeding should be undertaken in windy or unfavorable weather, when the ground is too wet to rake easily, when it is in a frozen condition, or too dry.

C. The subgrade of all areas to be seeded shall be raked and all rubbish, sticks, roots, and stones larger than 2 IN shall be removed.

D. Fertilizer shall be uniformly spread and disked or roto-tilled to a depth of at least 4 IN.

E. Immediately following this preparation the seed shall be uniformly applied and lightly raked into the surface. Lightly roll the surface and water with fine spray. Seed shall be applied, depending on the period of year, at the rates indicated in Section 810 of the SCDOT Standard Specifications for Highway Construction (Edition 2007).

All seeded areas shall be mulched with clean small-grain straw at a rate of 1½ to 2 tons per acre. Asphalt emulsion shall be applied uniformly at a rate of 300 GAL per acre to tack the mulch, unless otherwise shown on the plans. Mechanical tacking will be considered on a case-by-case basis as approved by the Engineer.

F. All seeded areas shall be watered and maintained in good condition. Reseeding shall be done if and when necessary until a good, healthy, uniform growth is established over the entire area seeded.

G. Slopes shall be protected against washouts by an approved method. Any washout which occurs shall be regraded and reseeded until good sod is established.

SEQUENCE OF CONSTRUCTION

A. Obtain all permits.

B. Contact the office of Ocean and Coastal Resource Management (OCRM) at (843)744-5838 prior to commencing construction activities.

C. Install sediment erosion controls as follows:

1. Silt Fences shall be used to prevent silt from leaving the limits of construction.
2. Stabilized Graveled Construction Entrances shall be used at locations where construction vehicles access public non-construction areas. Vehicles shall be washed down as necessary to prevent tracking of silt off-site.
3. A temporary rock filter dam or sediment tube shall be used as ditch checks as directed by the Engineer.
4. Adhere to all of the OCRM Standard Notes listed on the right of this sheet and install BMP's per the SCDOT Standard Drawings for Erosion Control.

D. A recommended sequence of construction follows:

1. Clear and grub only areas necessary for perimeter erosion and sediment control, silt fence, hay bales, and temporary sediment traps.
2. Construct perimeter controls.
3. Construct new drainage appurtenances within the areas protected by perimeter controls.
4. Install protection around inlets and stabilize disturbed areas as soon as possible (within 7 calendar days).
5. Proceed with construction. Limit disturbed areas to areas with work in progress to limit disruption to traffic. Schedule work to maintain access to all driveways as long as possible.
6. Erosion controls may be removed after the area contributing flow to that particular erosion control device has been stabilized.
7. Stabilize all remaining areas.
8. Clean out temporary sediment control as needed; check controls every seven (7) days.
9. Remove sediment controls 30 days after all disturbed areas have stabilized.

E. Submit Notice of Termination to SCDHEC.

STANDARD NOTES

1. If necessary, slopes which exceed eight (8) feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
2. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as stated below:
   - Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable.
   - Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the site.
3. All sediment and erosion control devices shall be inspected once every calendar week. If periodic inspection or other information indicates that a BMP has been inappropriately or incorrectly installed, the Permittee must address the necessary replacement or modification required to correct the BMP within 48 hours of identification
4. Provide silt fence and or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove any sediments before being pumped back into any waters of the state.
5. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.
6. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from the construction area and the generation of dust. The contractor shall daily remove mud/soil from pavement, as may be required.
7. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with S.C. REG. 72-300 ET SEQ. and SCR100000.
8. Temporary diversion berms and or ditches will be provided as needed during construction to protect work areas from upslope runoff and or to divert sediment-laden water to appropriate traps or stable outlets.
9. All waters of the state (WOS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WOS. A 10-foot buffer should be maintained between the last row of silt fence and all WOS.
10. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from being a pollutant source in storm water discharges.
11. A copy of the SWPPP, inspection records, and rainfall data must be retained at the construction site or a nearby location easily accessible during normal business hours, from the date of commencement of construction activities to the date that final stabilization is reached.
12. Initiate stabilization measures on any exposed steep slope (3H:1V or greater) where land-disturbing activities have permanently or temporarily ceased, and will not resume for a period of 7 calendar days.
13. Minimize soil compaction and, unless infeasible, preserve topsoil.
14. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
15. Minimize the discharge of pollutants from dewatering of trenches and excavated areas. These discharges are to be routed through appropriate BMPs (sediment basin, filter bag, etc.).
16. The following discharges from sites are prohibited:
    - Wastewater from washout of concrete, unless managed by an appropriate control;
    - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
    - Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
    - Soaps or solvents used in vehicle and equipment washing.
17. After construction activities begin, inspections must be conducted at a minimum of at least once every calendar week and must be conducted until final stabilization is reached on all areas of the construction site.
18. If existing BMPs need to be modified or if additional BMPs are necessary to comply with the requirements of this permit and/or SC's Water Quality Standards, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as reasonably possible.
19. A Pre-Construction Conference must be held for each construction site with an approved On-Site SWPPP prior to the implementation of construction activities. For non-linear projects that disturb 10 acres or more this conference must be held on-site unless the Department has approved otherwise.

STANDARD EROSION CONTROL DRAWINGS

SEE DETAIL SHEETS FOR EROSION CONTROL DRAWINGS

SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 2/15/18 No. 20214 GEORGE TILLEY BUTLER JR.

DAVIS & FLOYD

SINCE 1954

WWW.DAVISFLOYD.COM

3229 W. MONTAGUE AVENUE
NORTH CHARLESTON, SC 29418
(843) 554-8402

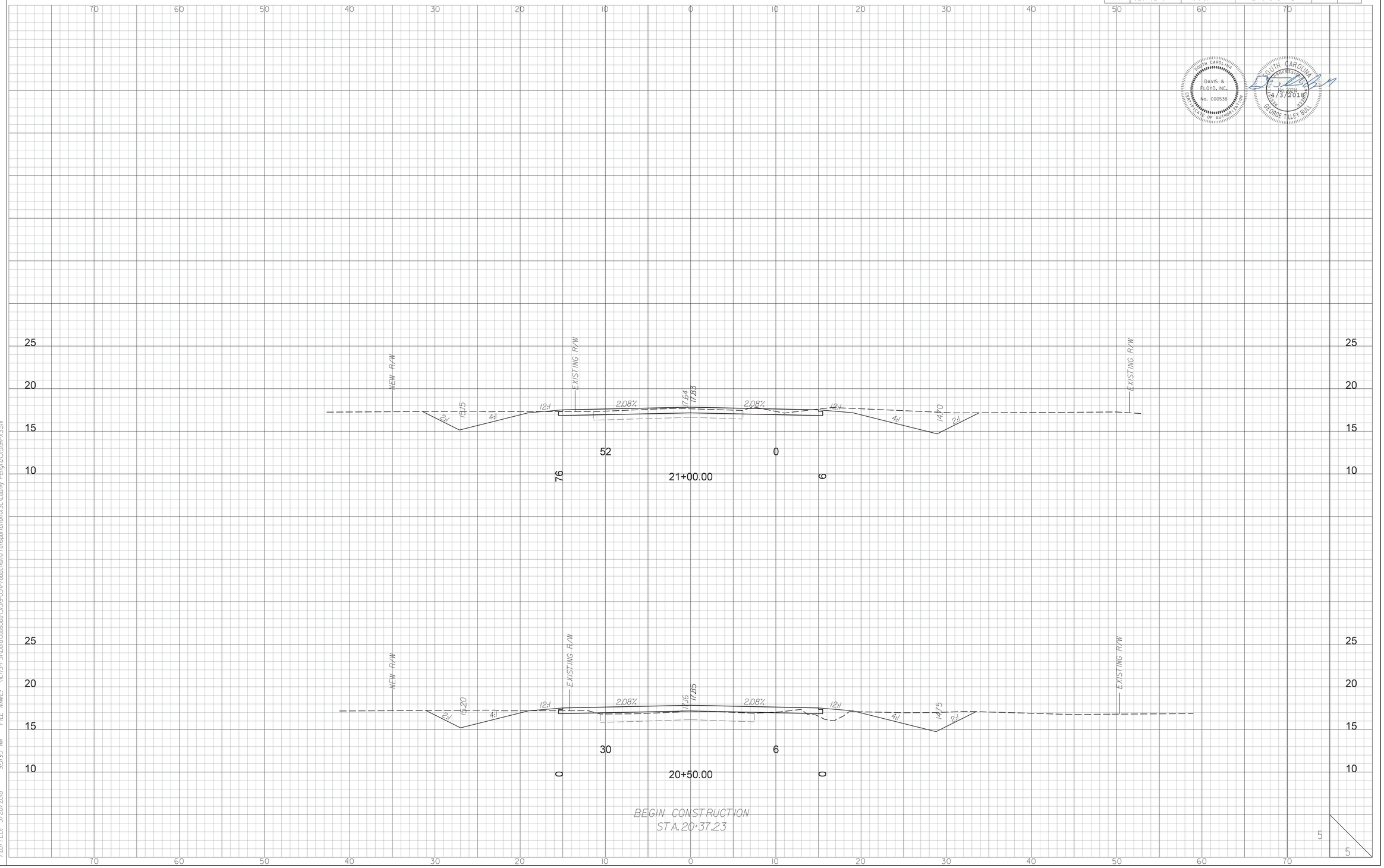
REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DGN. AMS DATE
R/W DATE
CHK. GTB DATE

GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
EROSION CONTROL NOTES

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	XI	



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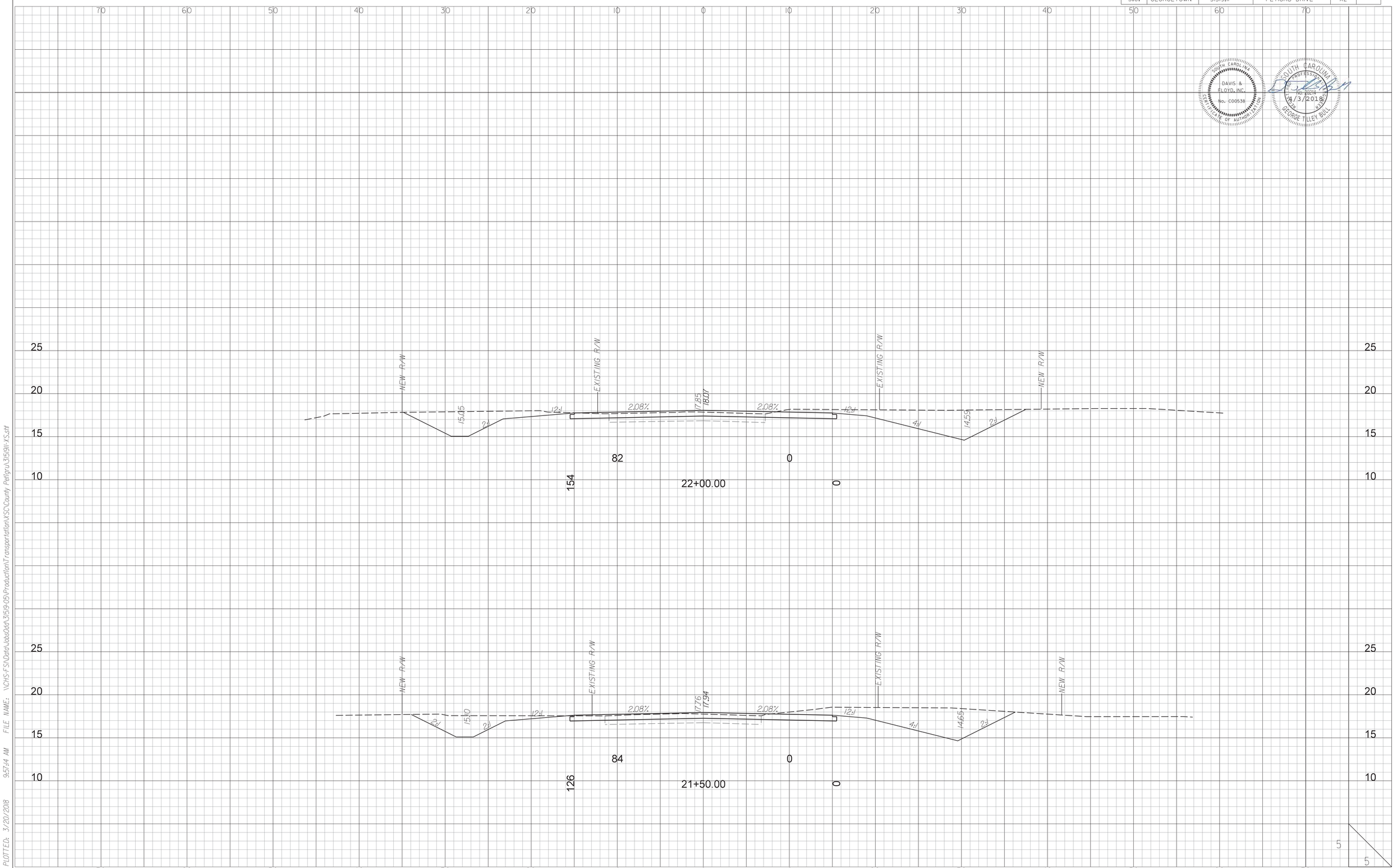

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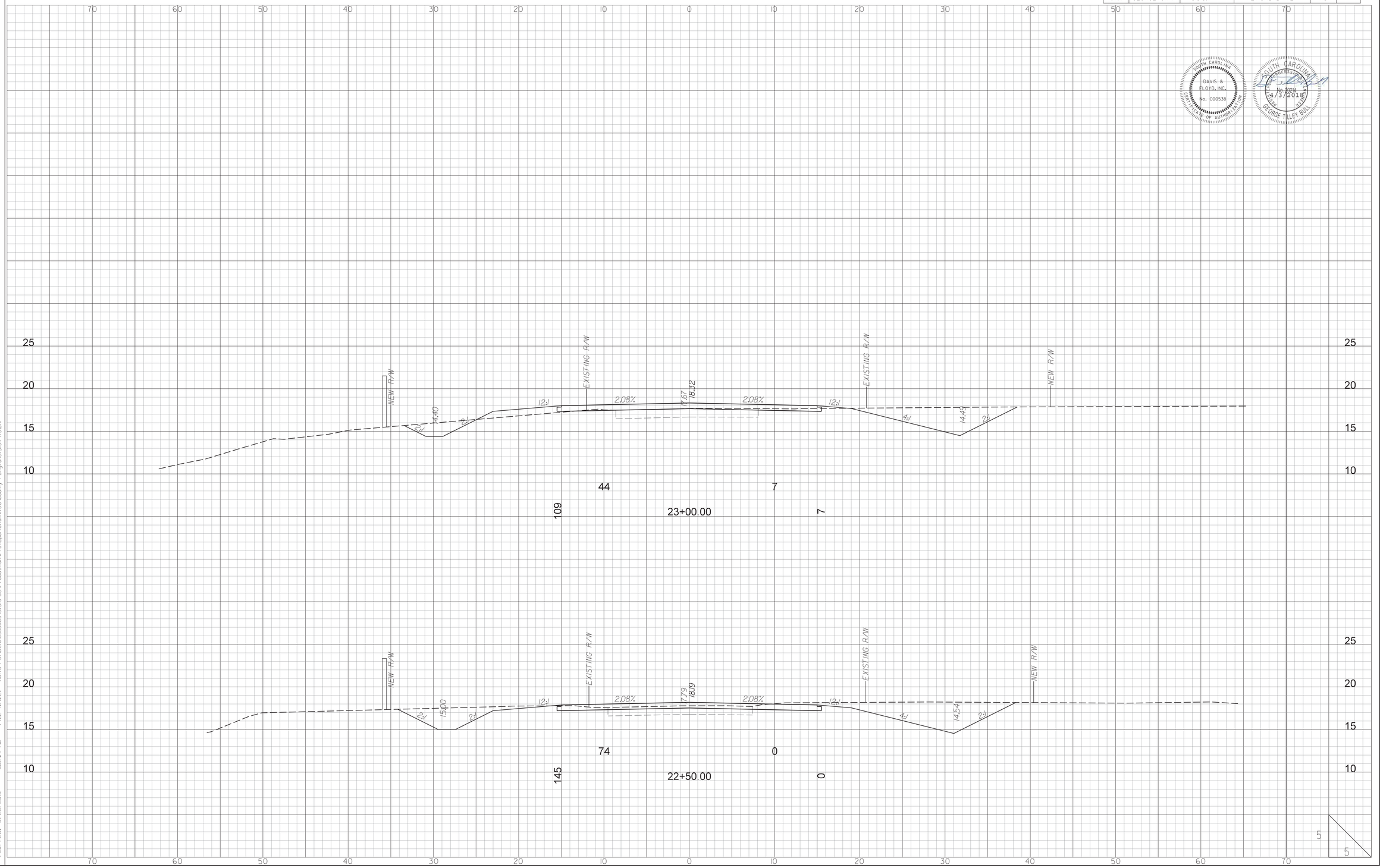
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X3	



DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED No. 20214 4/3/2018 GEORGE TILLEY BULL

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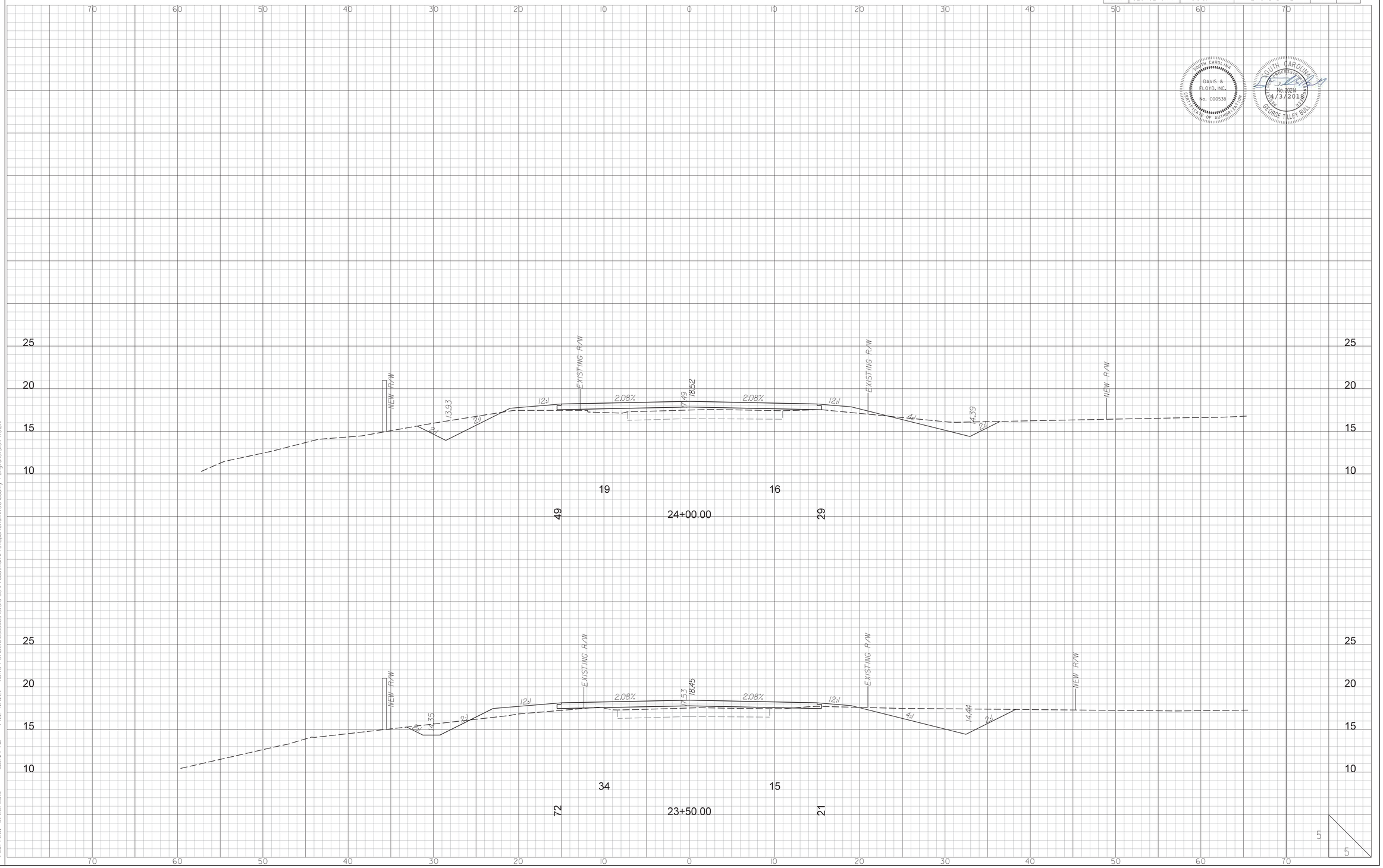
S.C.	GEORGETOWN	315191.11	PETIGRU DRIVE	X4	



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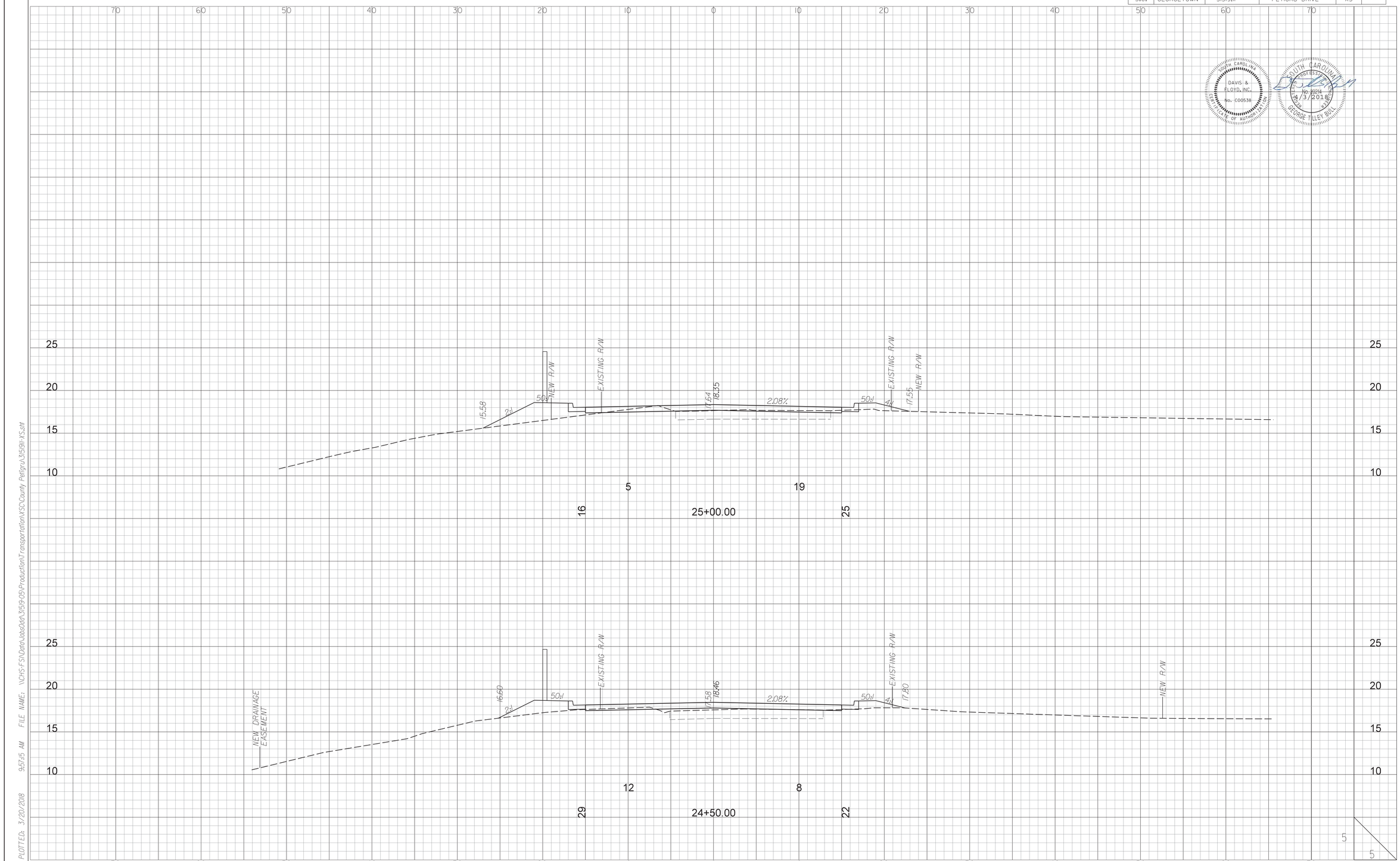
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	315191.11	PETIGRU DRIVE	X5	



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STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	315191.11	PETIGRU DRIVE	X6	

SOUTH CAROLINA
DAVIS & FLOYD, INC.
No. C00538
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 20214
4/3/2018
GEORGE TILLEY BULL

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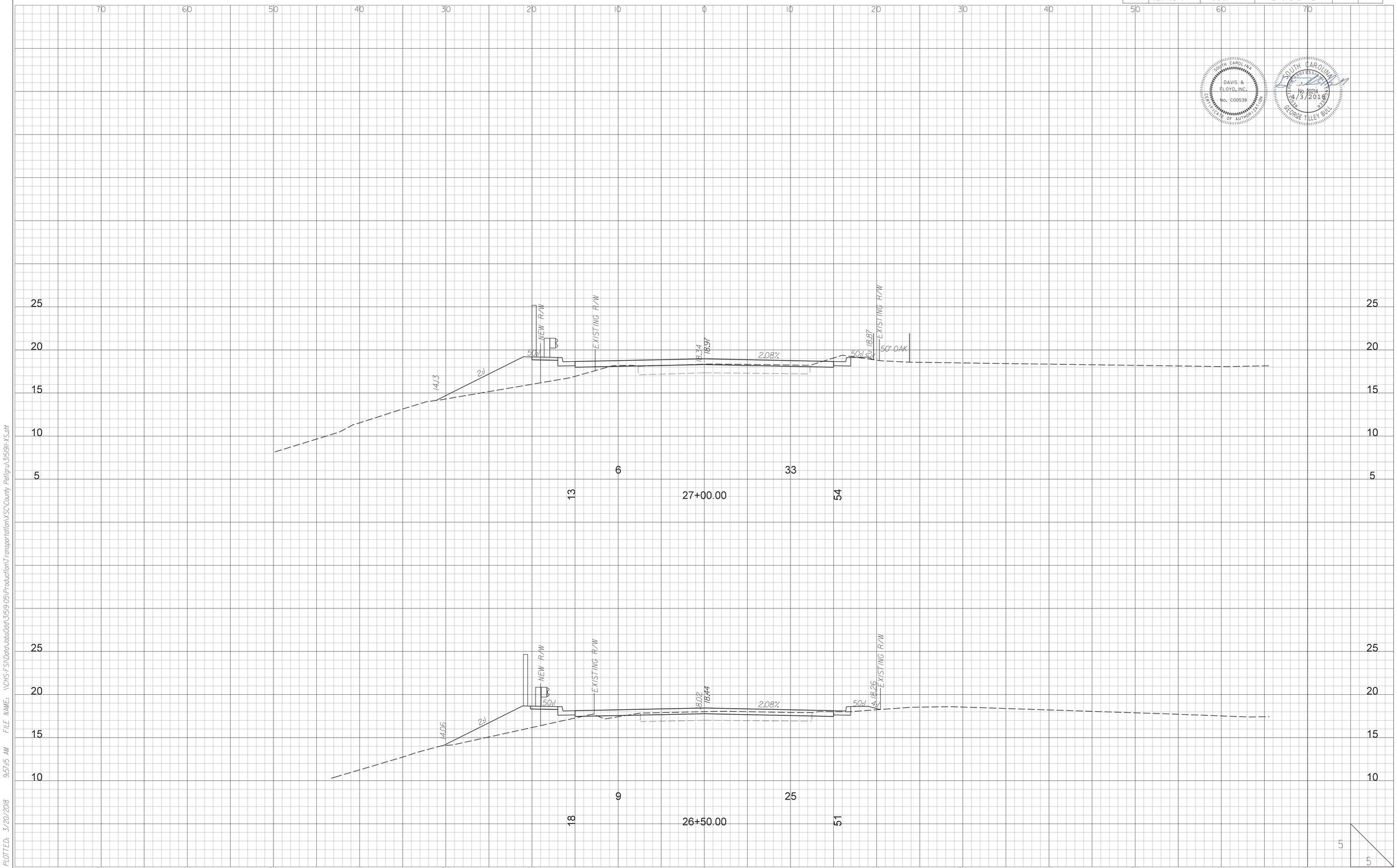
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X7	



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Bid No. 18-005

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
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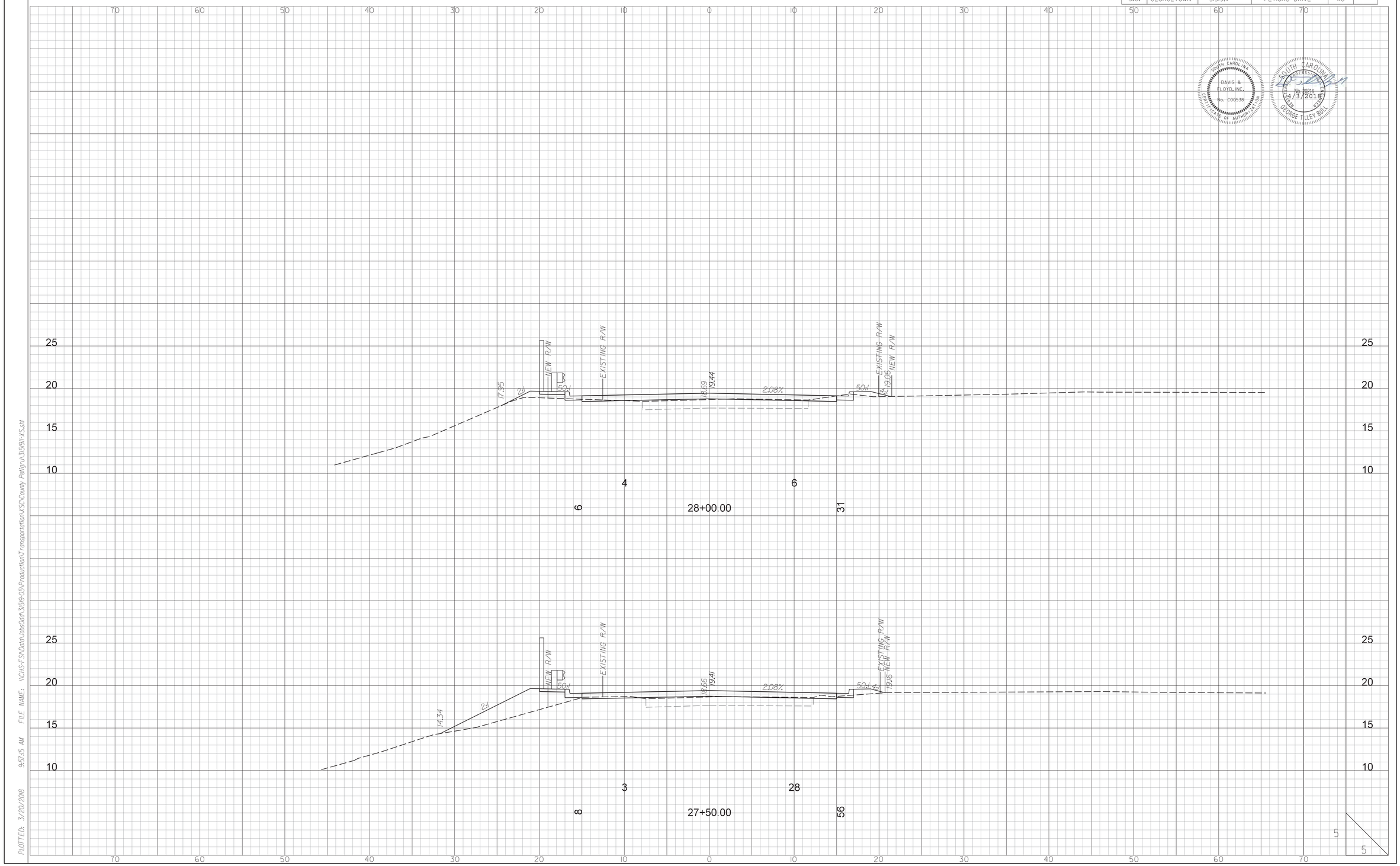

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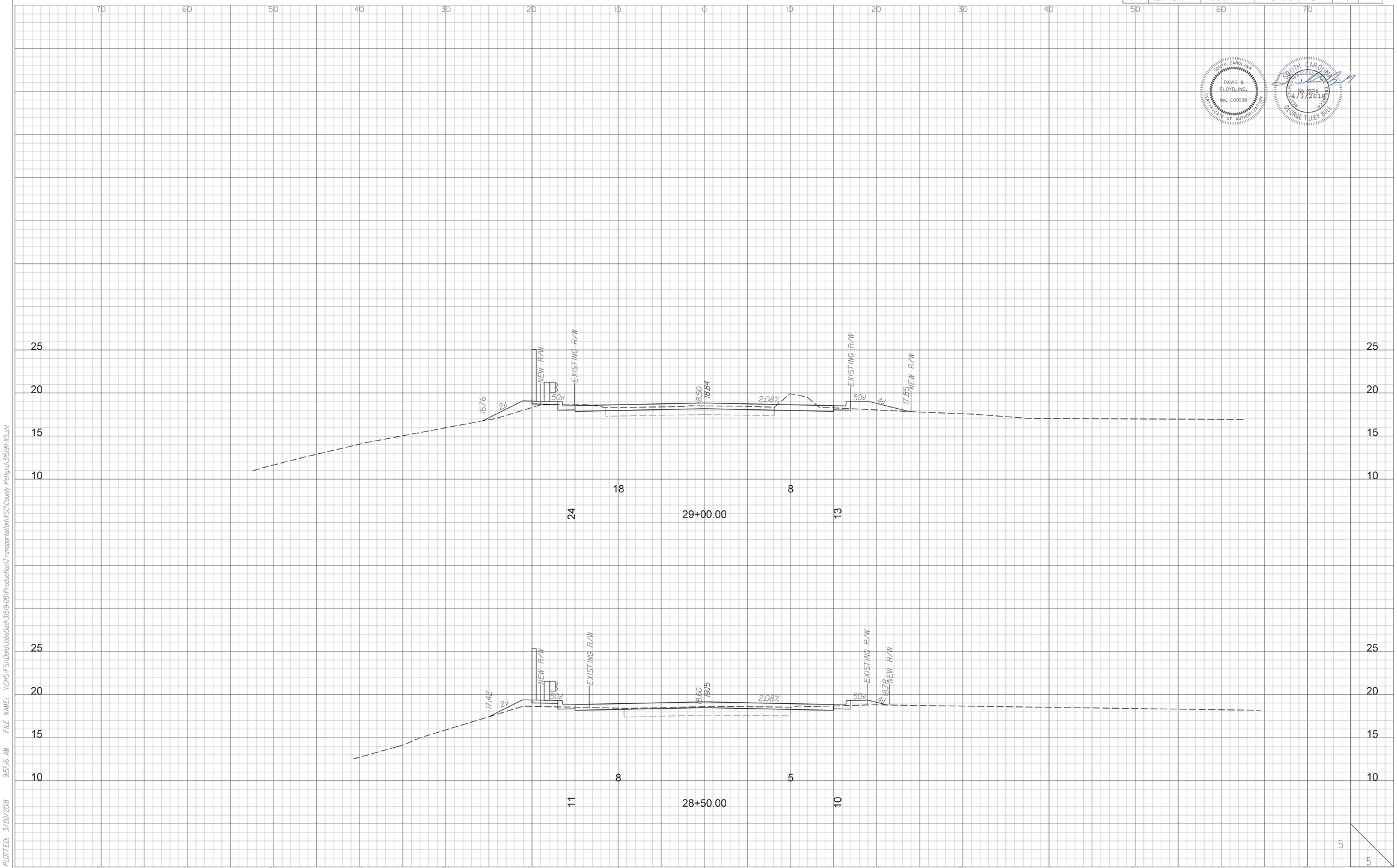
S.C.	GEORGETOWN	315191.11	PETIGRU DRIVE	X9	



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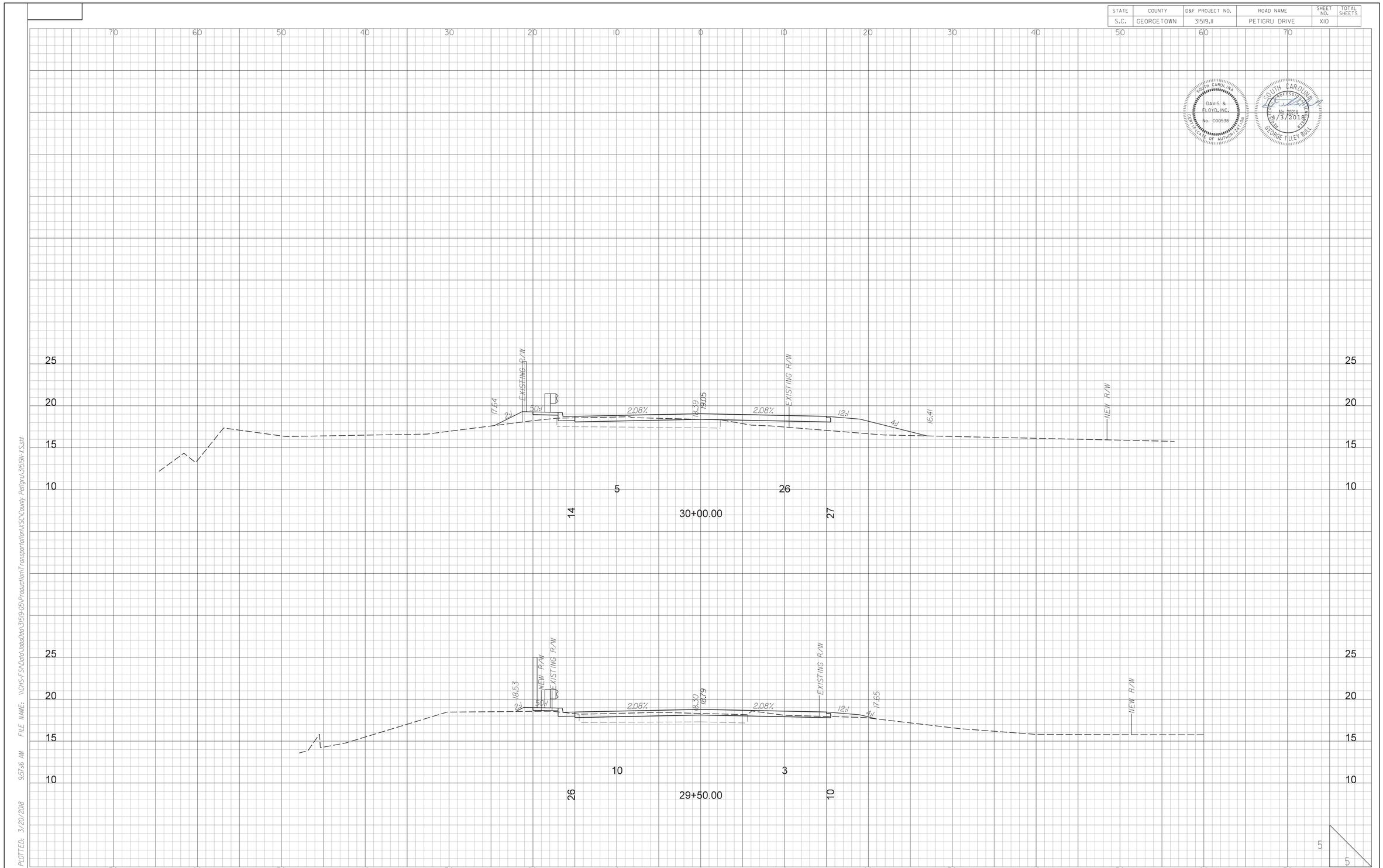
S.C.	GEORGETOWN	315191.11	PETIGRU DRIVE	X10	



DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20214 4/3/2018 GEORGE TILLEY BULLOCK

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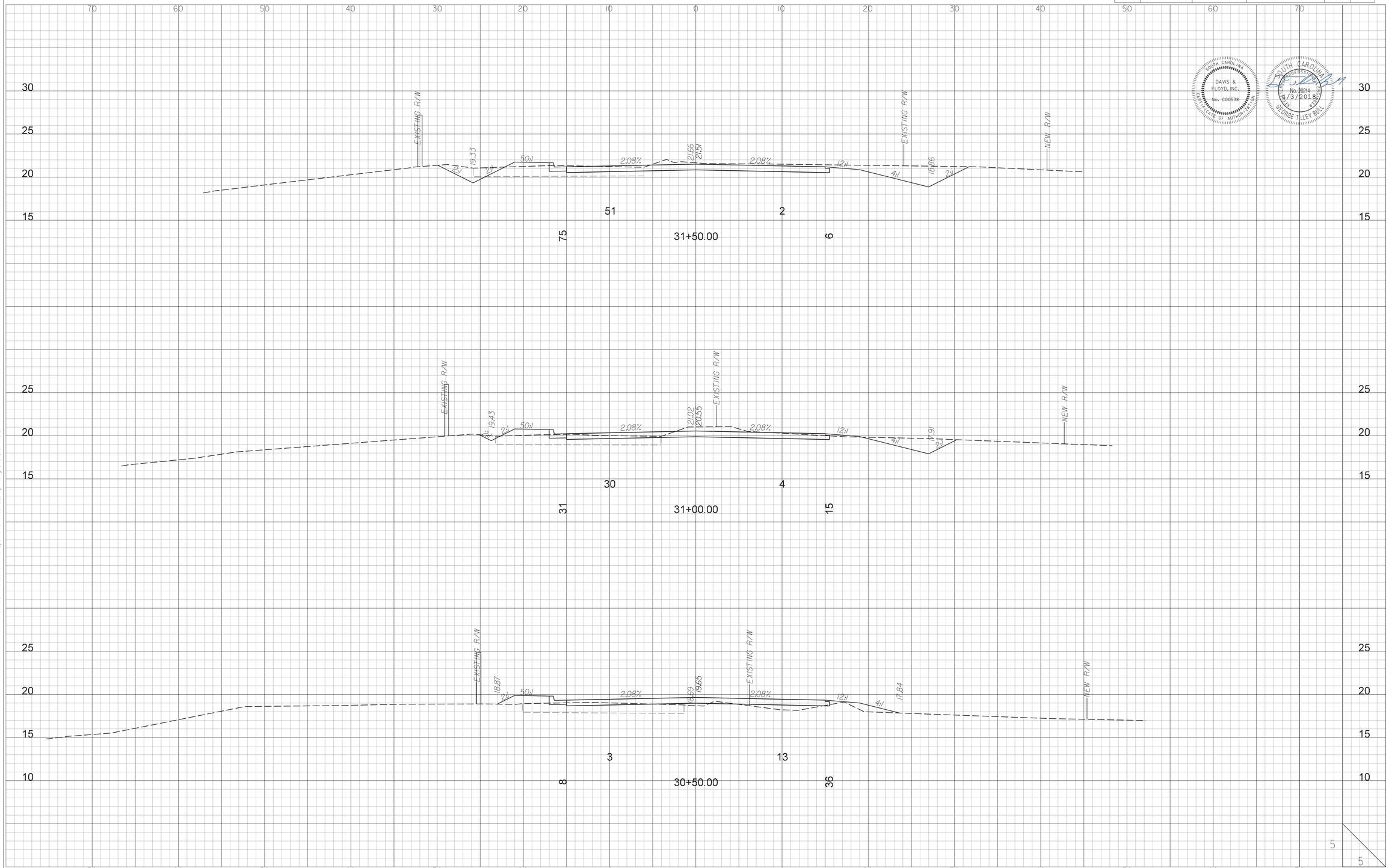

DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED No. 20214 3/3/2018 GEORGE TILLEY BULLOCK

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STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
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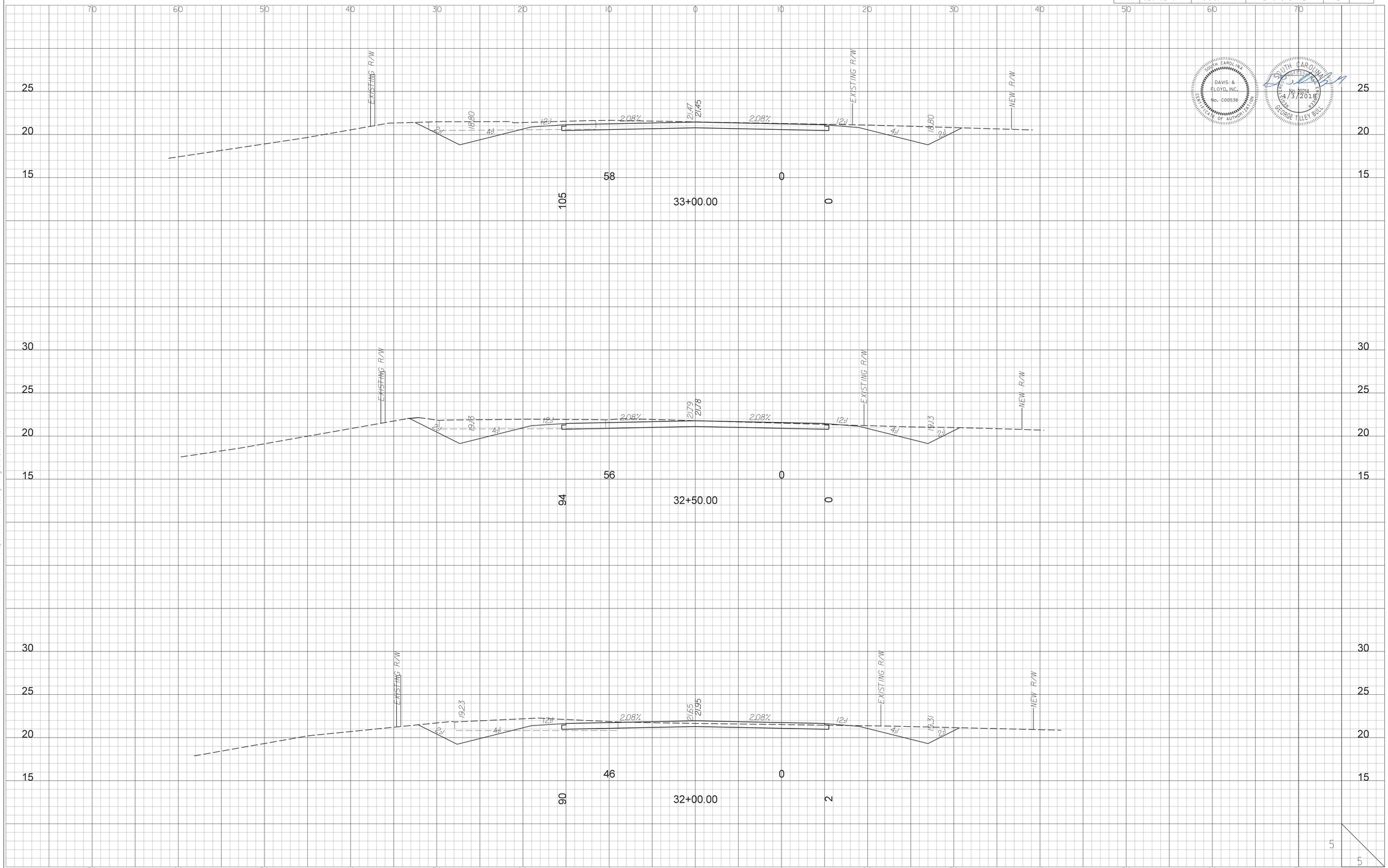

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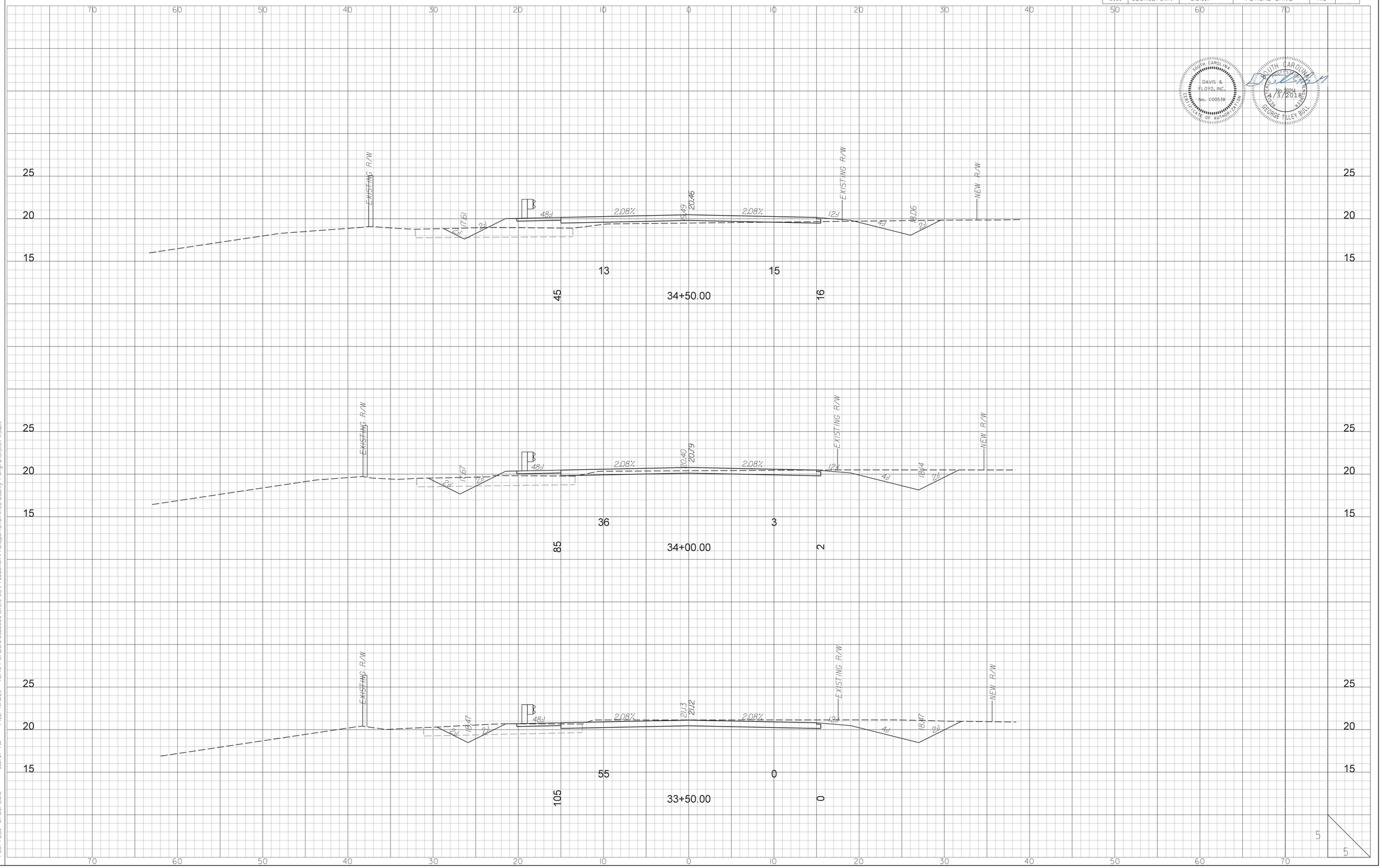
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	315191.11	PETIGRU DRIVE	X13	



DAVIS & FLOYD, INC. No. C00536 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED No. 20214 PROFESSIONAL ENGINEER 4/3/2018 GEORGE TILLEY BULLARD

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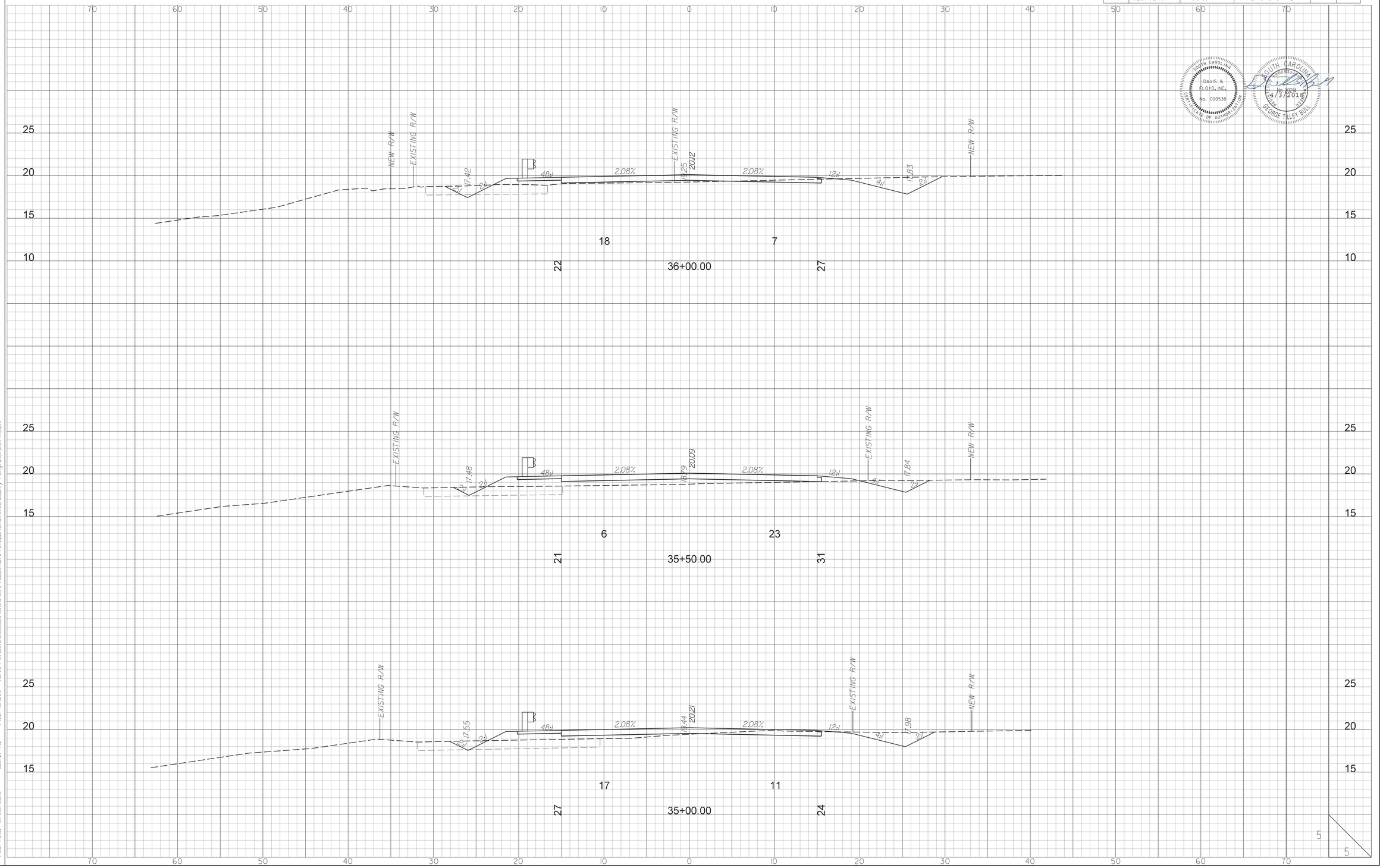
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X14	



DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 20214 4/3/2018 GEORGE TILLEY BULLARD

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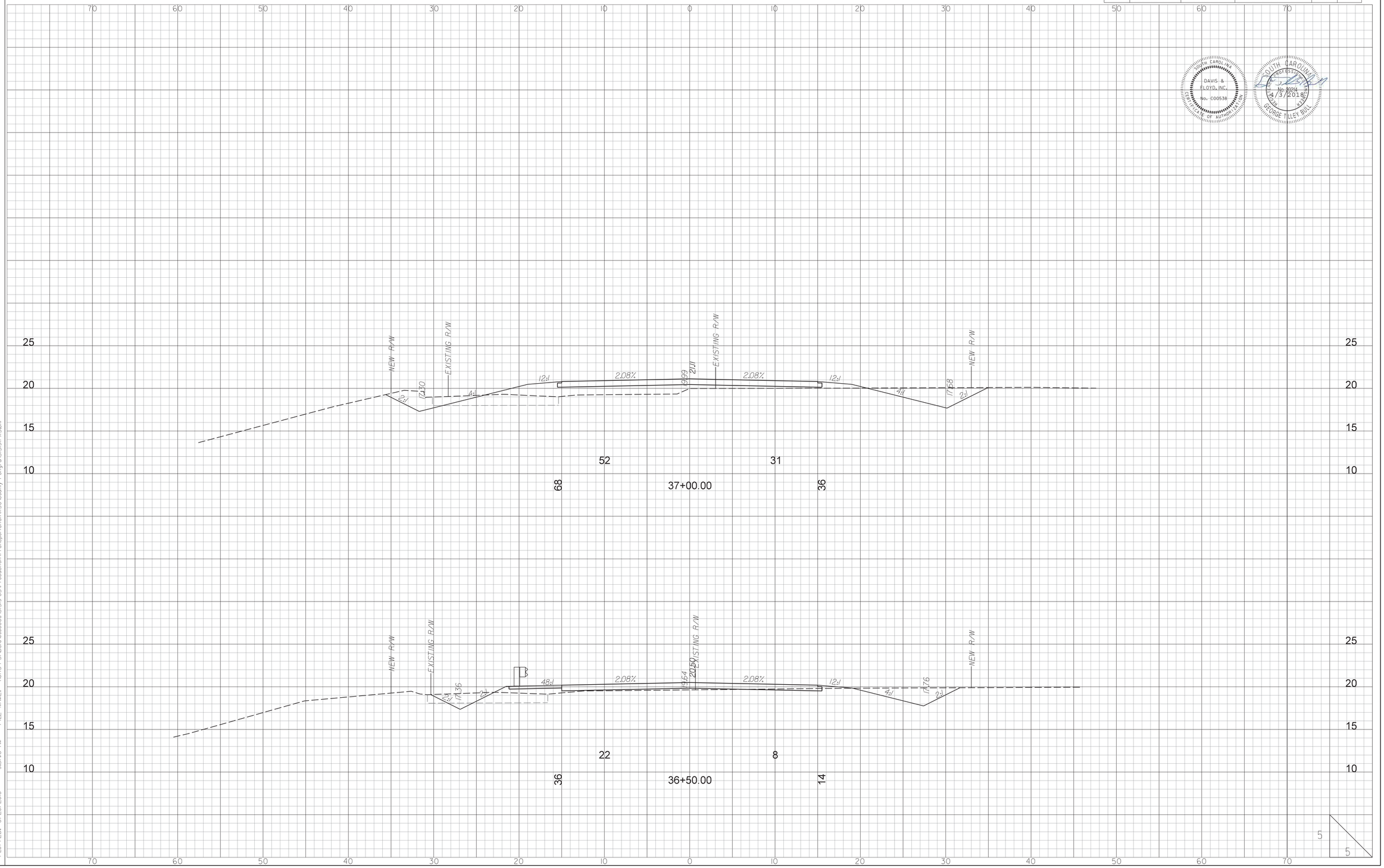
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X15	

DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20214 4/3/2018 GEORGE TILLEY BULLOCK



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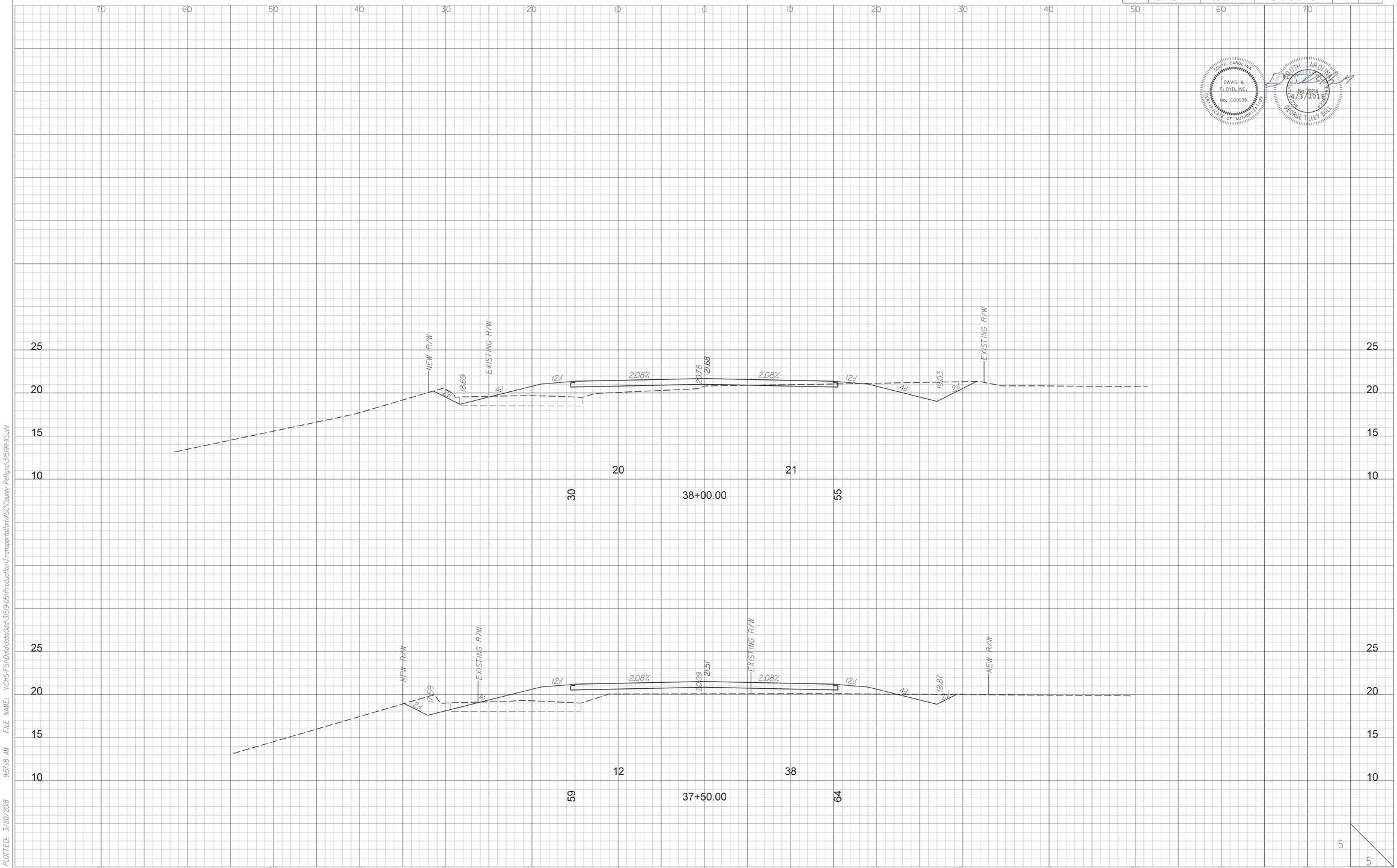
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X16	



DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED No. 20214 4/3/2018 GEORGE TILLEY BULLARD

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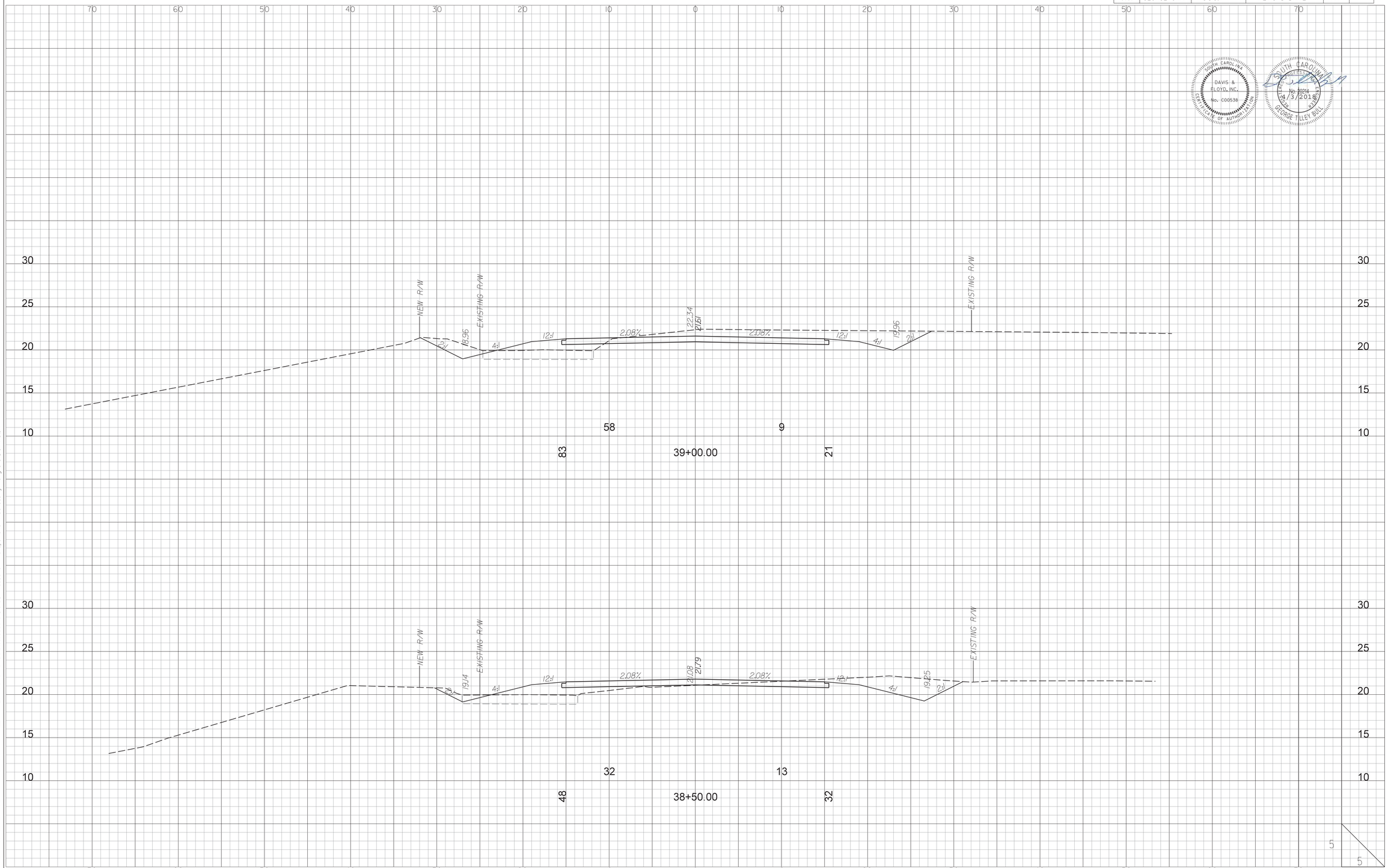
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X17	



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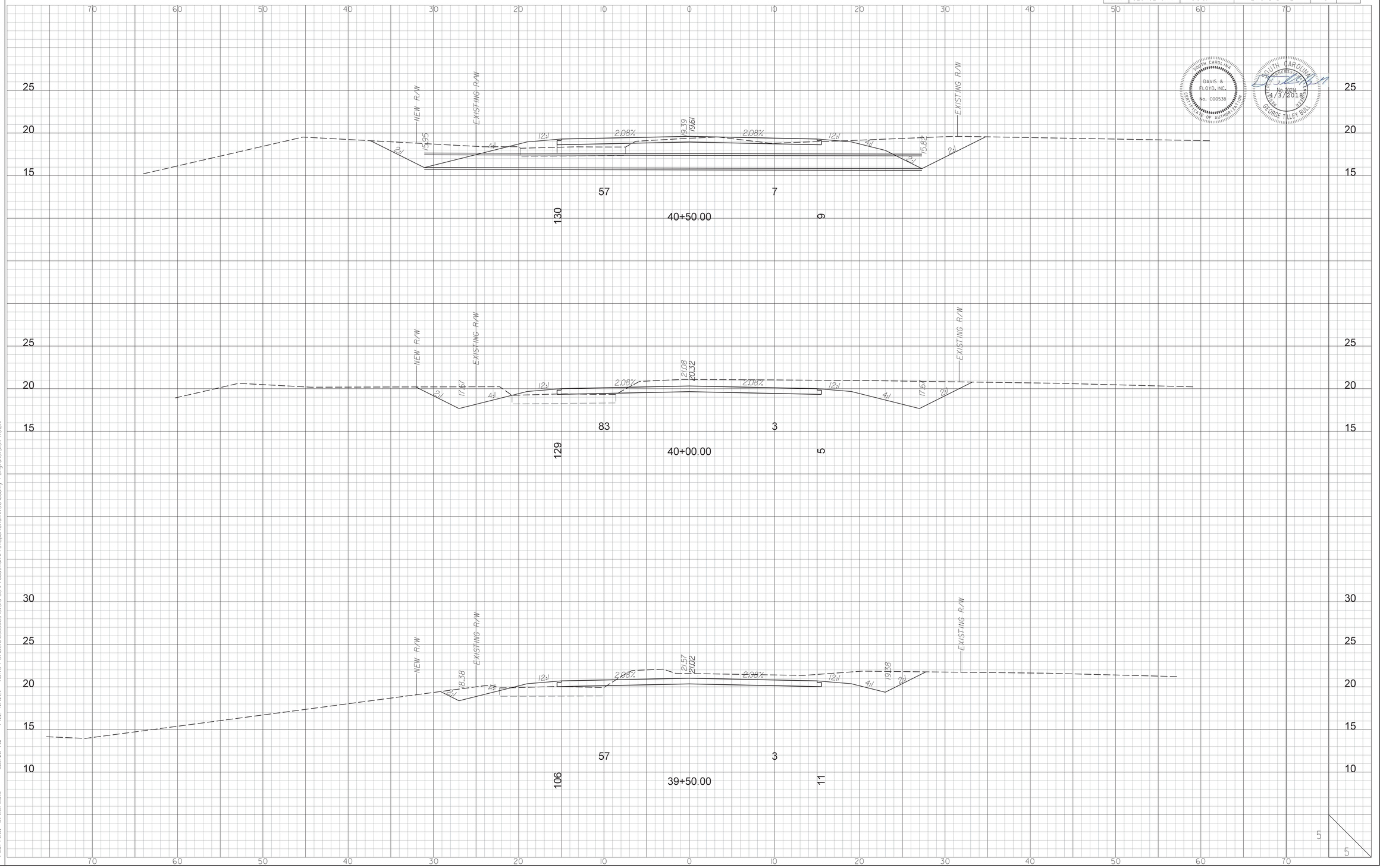
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X18	



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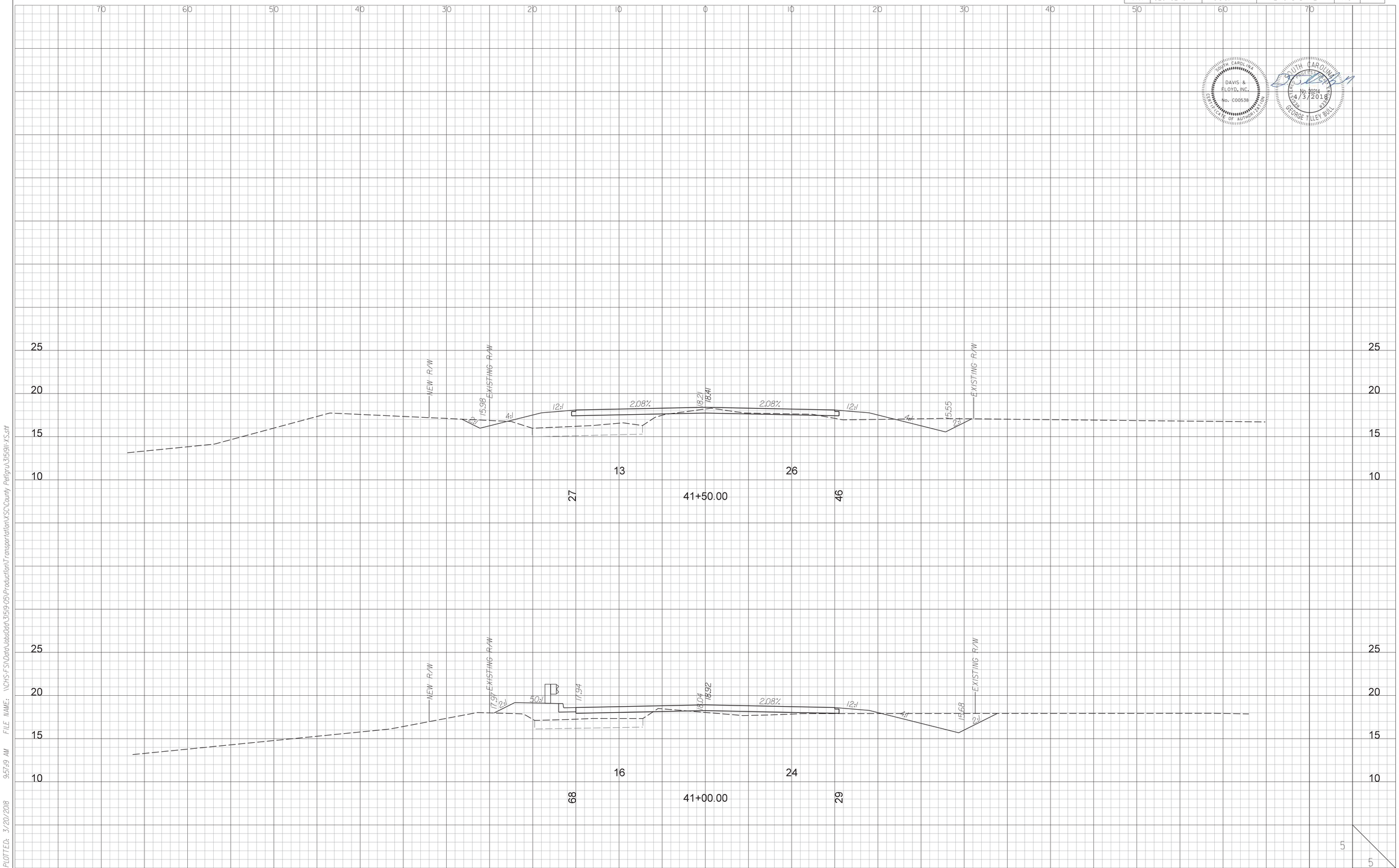
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X19	



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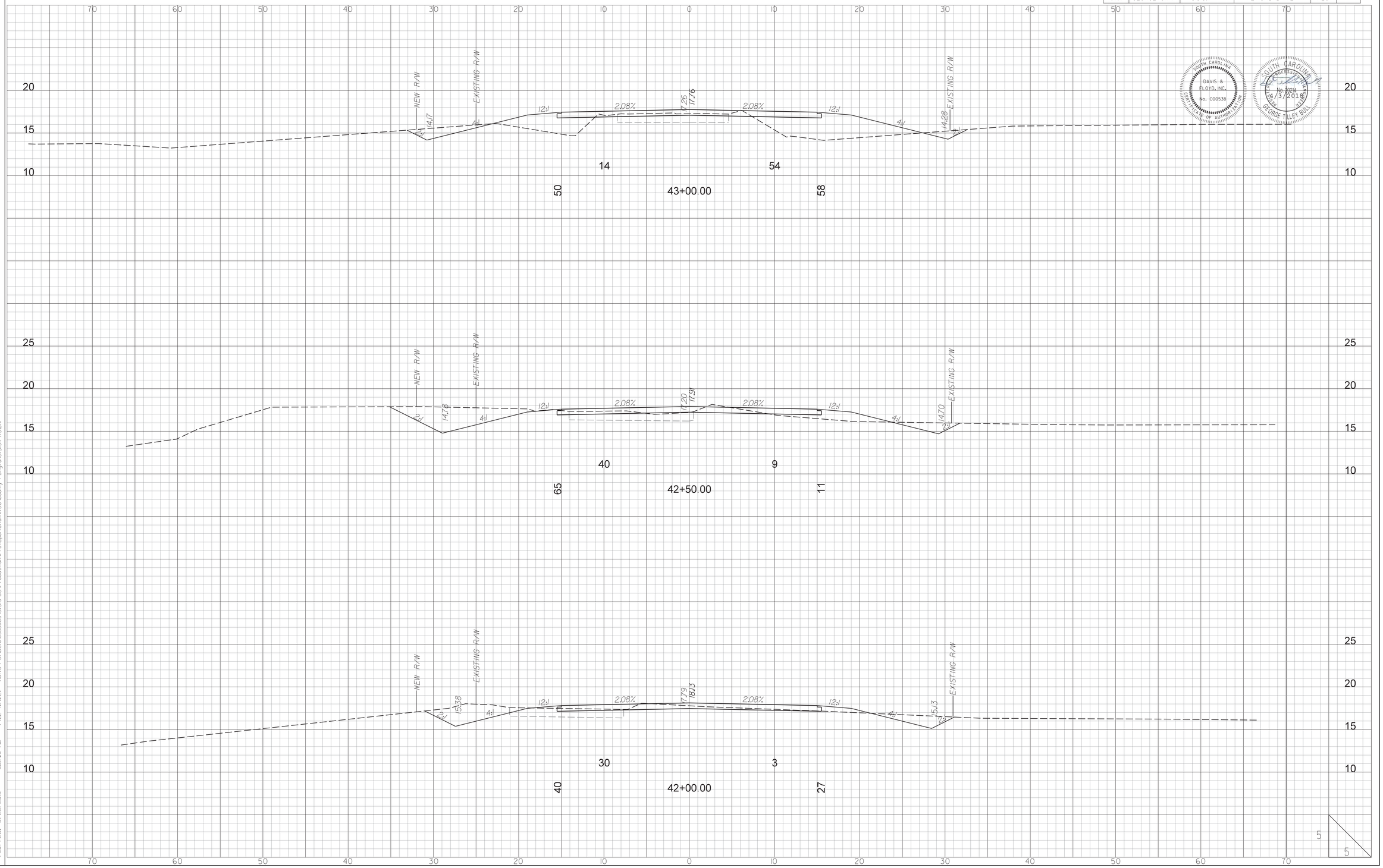
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	315191.11	PETIGRU DRIVE	X20	



DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20214 GEORGE TILLEY BULLOCK 4/3/2018

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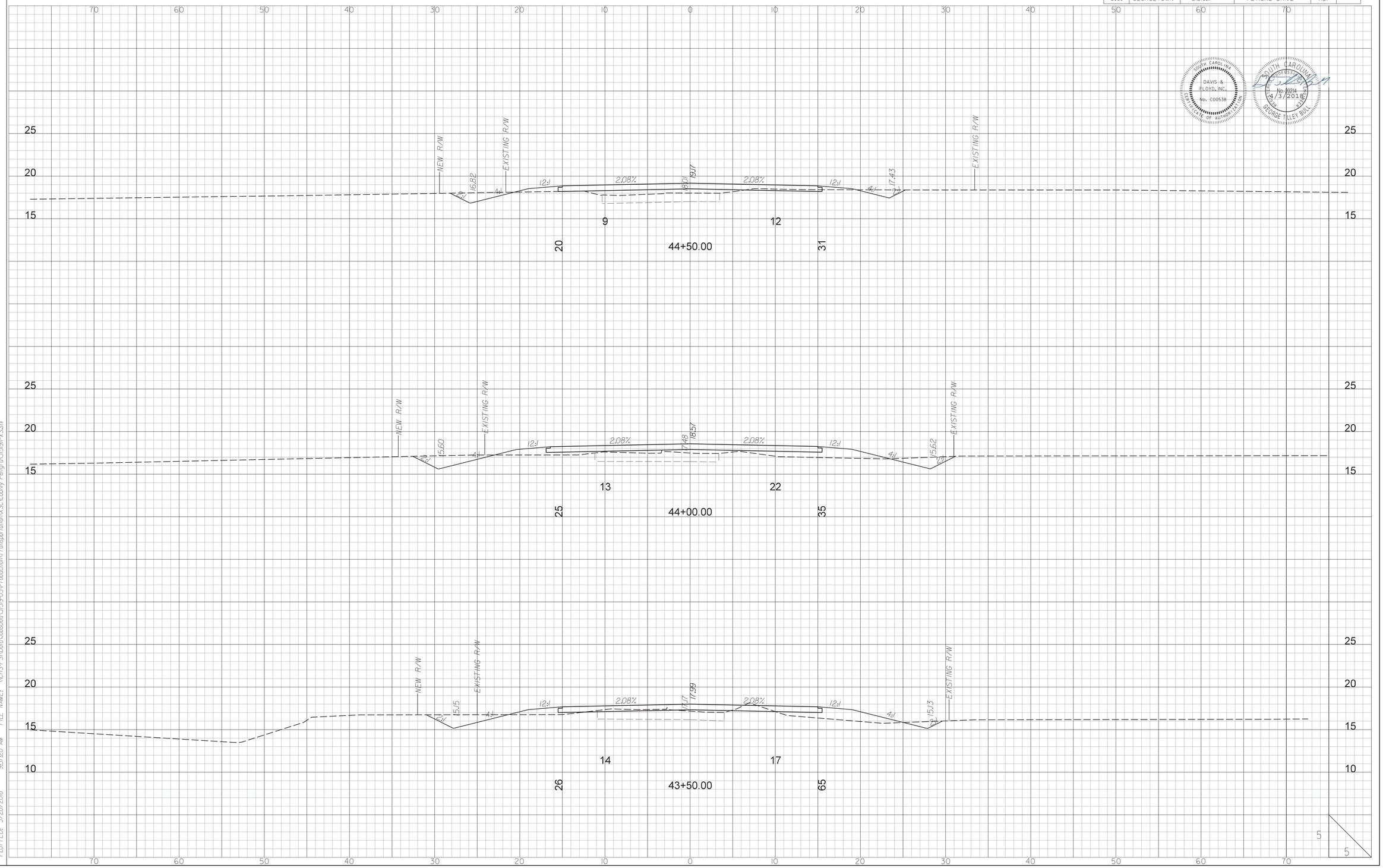
S.C.	GEORGETOWN	3151911	PETIGRU DRIVE	X21	



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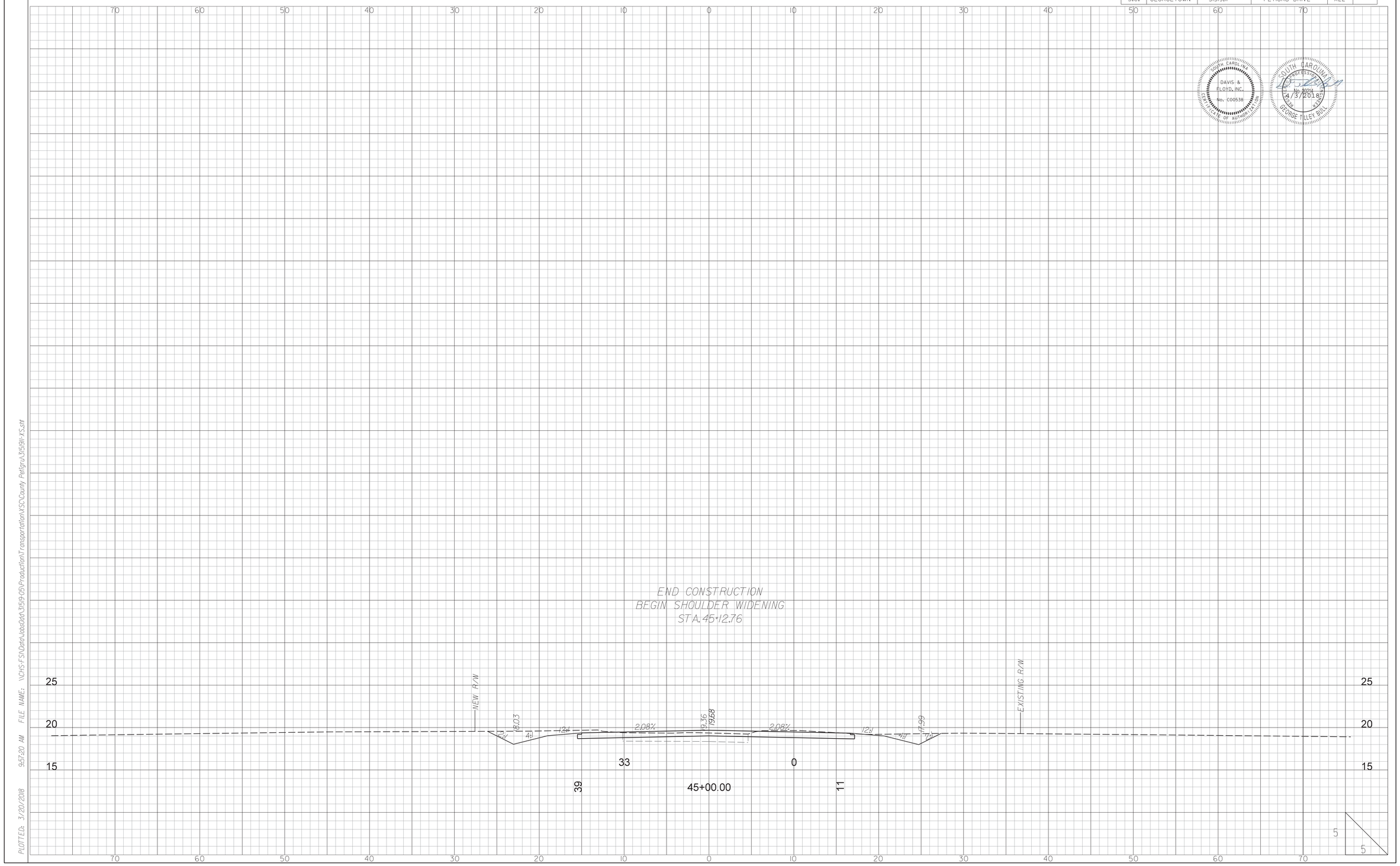
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	X22	



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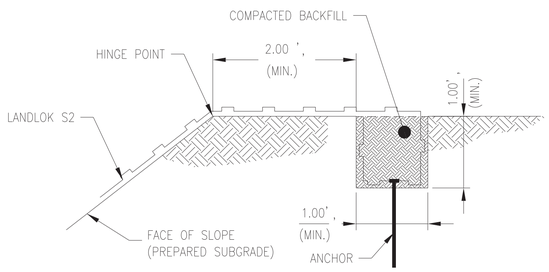
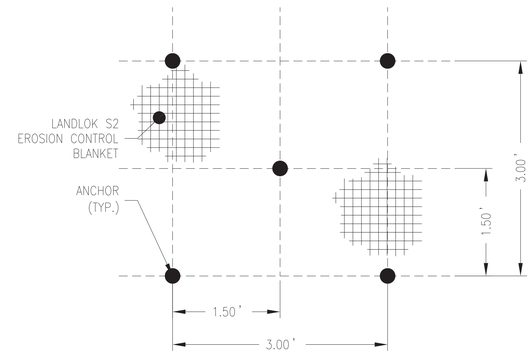


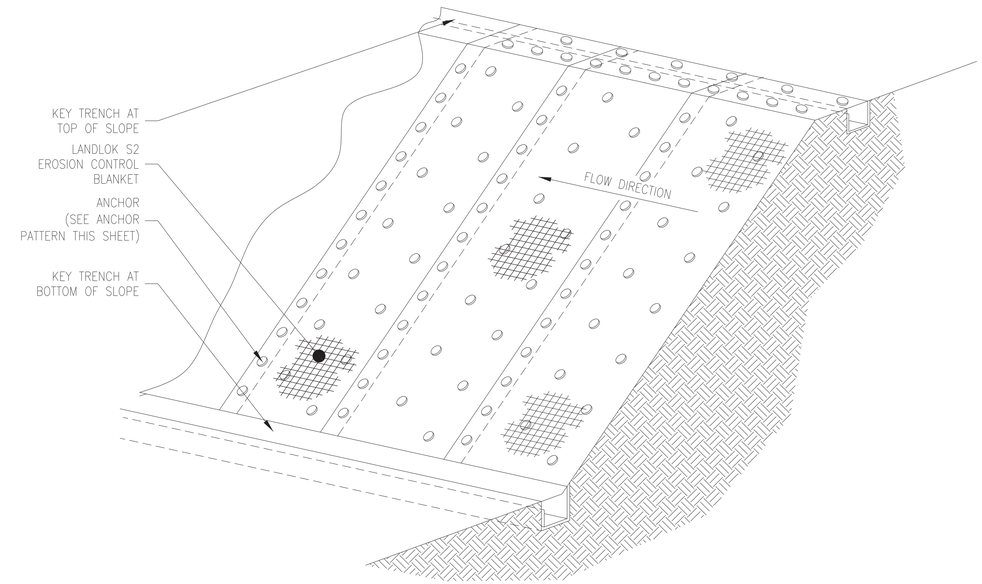
KEY TRENCH AT TOP OF SLOPE DETAIL

NTS



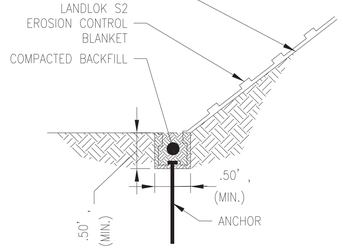
ANCHOR PATTERN

NTS



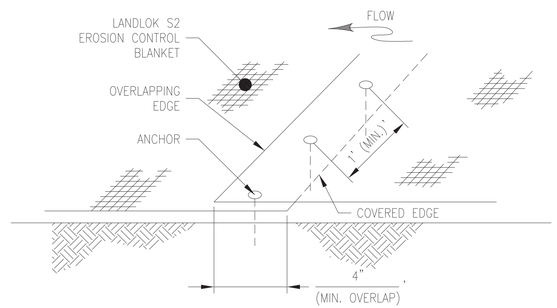
TURF REINFORCEMENT BLANKET ON SLOPE

NTS (ISOMETRIC)



KEY TRENCH AT BOTTOM OF SLOPE DETAIL

NTS



TURF REINFORCEMENT BLANKET OVERLAP JOINT

NTS

SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 2/15/18 No. 20214 GEORGE TILLEY BLACK

DAVIS & FLOYD

SINCE 1954

WWW.DAVISFLOYD.COM

3229 W. MONTAGUE AVENUE
NORTH CHARLESTON, SC 29418
(843) 554-8062

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DGN. AMS DATE
R/W DATE
CHK. GTB DATE

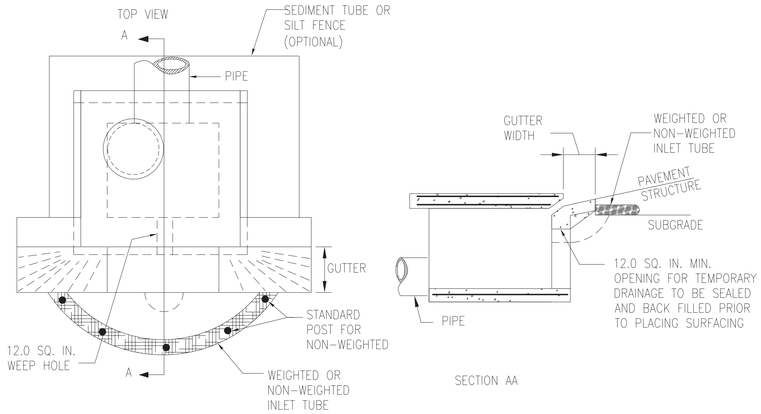
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE

TURF REINFORCEMENT BLANKET DETAIL

NTS

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	D02	



SC-11 TYPE F INLET TUBES

MATERIALS
USE INLET TUBES THAT EXHIBIT THE FOLLOWING PROPERTIES:
PRODUCED BY A MANUFACTURER EXPERIENCED IN SEDIMENT TUBE MANUFACTURING.
COMPOSED OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBERS OR HARDWOOD MULCH OR A MIX OF THESE MATERIALS ENCLOSED BY A FLEXIBLE NETTING MATERIAL.
DO NOT USE STRAW, STRAW FIBER, STRAW BALES, PINE NEEDLES OR LEAF MULCH UNDER THIS SPECIFICATION.
UTILIZE AN OUTER NETTING THAT CONSISTS OF SEAMLESS, HIGH-DENSITY POLYETHYLENE PHOTODEGRADABLE MATERIALS TREATED WITH ULTRAVIOLET STABILIZERS OR A SEAMLESS, HIGH-DENSITY
POLYETHYLENE NON-DEGRADABLE MATERIALS.CURLED WOOD EXCELSIOR FIBER, OR NATURAL COCONUT FIBER ROLLED EROSION CONTROL PRODUCTS (RECP) ROLLED UP TO CREATE AN INLET TUBE
DEVICES ARE NOT ALLOWED UNDER THIS SPECIFICATION.

WEIGHTED INLET TUBES
WEIGHTED INLET TUBES ARE SEDIMENT TUBES CAPABLE OF STAYING IN PLACE WITHOUT EXTERNAL STABILIZATION MEASURES AND MAY HAVE A WEIGHTED INNER CORE OR OTHER WEIGHTED
MECHANISM TO KEEP THEM IN PLACE.

MATERIALS
APPLICABLE TYPE F WEIGHTED INLET TUBES MAY BE SELECTED FROM THE SCDOT APPROVED PRODUCTS LIST.

INSTALLATION:
INSTALL WEIGHTED INLET TUBES LYING FLAT ON THE GROUND, WITH NO GAPS BETWEEN THE UNDERLYING SURFACE AND THE INLET TUBE.
NEVER STACK WEIGHTED INLET TUBES ON TOP OF ONE ANOTHER.

DO NOT COMPLETELY BLOCK INLETS WITH WEIGHTED INLET TUBES.

INSTALL WEIGHTED INLET TUBES IN SUCH A MANNER THAT ALL OVERFLOW OR OVERTOPPING WATER HAS THE ABILITY TO ENTER THE INLET UNOBSTRUCTED.

TO AVOID POSSIBLE FLOODING, TWO OR THREE CONCRETE CINDER BLOCKS MAY BE PLACED BETWEEN THE WEIGHTED INLET TUBES AND THE INLET.

NON-WEIGHTED INLET TUBES
NON-WEIGHTED INLET TUBES ARE DEFINED AS SEDIMENT TUBES THAT REQUIRE STAKING OR OTHER STABILIZATION METHODS TO KEEP THEM SAFELY IN PLACE.

MATERIALS
APPLICABLE TYPE F NON-WEIGHTED INLET TUBES MAY BE SELECTED FROM THE SCDOT APPROVED PRODUCTS LIST.

INSPECTION AND MAINTENANCE:
INLET TUBES MAY BE TEMPORARILY MOVED DURING CONSTRUCTION AS NEEDED.
REPLACE INLET TUBES DAMAGED DURING INSTALLATION AS DIRECTED BY THE INSPECTOR OR MANUFACTURER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

SC-07: TYPE A FILTER FABRIC INLET PROTECTION

MATERIALS:
USE FILTER FABRIC THAT CONFORMS TO SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION). REFER TO THE SILT FENCE GEOTEXTILE FABRICS APPROVAL SHEET #34.

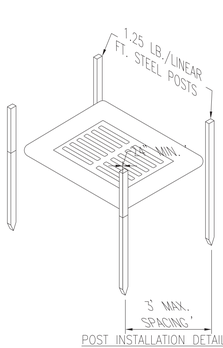
USE STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
BE COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
WEIGH 1.25 POUNDS PER FOOT (±8%).
BE PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.
ATTACH FABRIC TO METAL POSTS WITH HEAVY-DUTY PLASTIC TIES.

INSTALLATION:
EXCAVATE A TRENCH 6-INCHES WIDE AND 6-INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE INLET UNLESS THE FABRIC IS PNEUMATICALLY INSTALLED. EXTEND THE FILTER FABRIC A MINIMUM OF 12-INCHES INTO THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR CRUSHED STONE AND COMPACT OVER THE FILTER FABRIC UNLESS THE FABRIC IS PNEUMATICALLY INSTALLED.

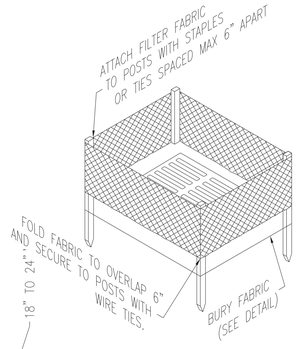
USE STEEL POSTS WITH A MINIMUM POST LENGTH OF 60-INCHES CONSISTING OF STANDARD "T" SECTIONS WITH A WEIGHT OF 1.25 POUNDS PER FOOT (±8%). INSTALL THE FILTER FABRIC TO A MINIMUM HEIGHT OF 24-INCHES ABOVE GRADE. SPACE THE STEEL POSTS AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3-FEET APART AND DRIVE THEM INTO THE GROUND A MINIMUM OF 24-INCHES. CUT THE FILTER FABRIC FROM A CONTINUOUS ROLL TO THE LENGTH OF THE PROTECTED AREA TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, WRAP FILTER FABRIC TOGETHER ONLY AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A MINIMUM 6-INCH OVERLAP. ATTACH FABRIC TO STEEL POSTS WITH HEAVY-DUTY PLASTIC TIES. ATTACH AT LEAST FOUR (4) EVENLY SPACED TIES IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN ALL CASES, AFFIX TIES IN NO LESS THAN FOUR (4) PLACES.

INSPECTION AND MAINTENANCE:
INSPECTIONS SHOULD BE MADE EVERY 7 CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH STORM THAT PRODUCES 1/2-INCHES OR MORE OF RAIN. IF THE FABRIC BECOMES CLOGGED, IT SHOULD BE REPLACED. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE FENCE. TAKE CARE NOT TO DAMAGE OR UNDERCUT FABRIC WHEN REMOVING SEDIMENT. IF A SUMP IS USED, SEDIMENT SHOULD BE REMOVED WHEN IT FILLS APPROXIMATELY 1/3 THE DEPTH OF THE HOLE. MAINTAIN THE POOL AREA, ALWAYS PROVIDING ADEQUATE SEDIMENT STORAGE VOLUME FOR THE NEXT STORM.

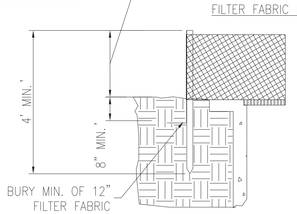
STORM DRAIN INLET PROTECTION STRUCTURES SHOULD BE REMOVED ONLY AFTER THE DISTURBED AREAS ARE PERMANENTLY STABILIZED. REMOVE ALL CONSTRUCTION MATERIAL AND SEDIMENT, AND DISPOSE OF THEM PROPERLY. GRADE THE DISTURBED AREA TO THE ELEVATION OF THE DROP INLET STRUCTURE CREST. USE APPROPRIATE PERMANENT STABILIZATION METHODS TO STABILIZE BARE AREAS AROUND THE INLET.



POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION DETAIL



FILTER FABRIC BURIAL DETAIL

SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER 2/15/18 No. 20214 GEORGE TILLEY BOLTON

DAVIS & FLOYD
SINCE 1954
WWW.DAVISFLOYD.COM

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N. CHARLESTON, S.C. 29418
(843) 554-8602

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2			
1			

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R/W DATE
CHK. GTB DATE

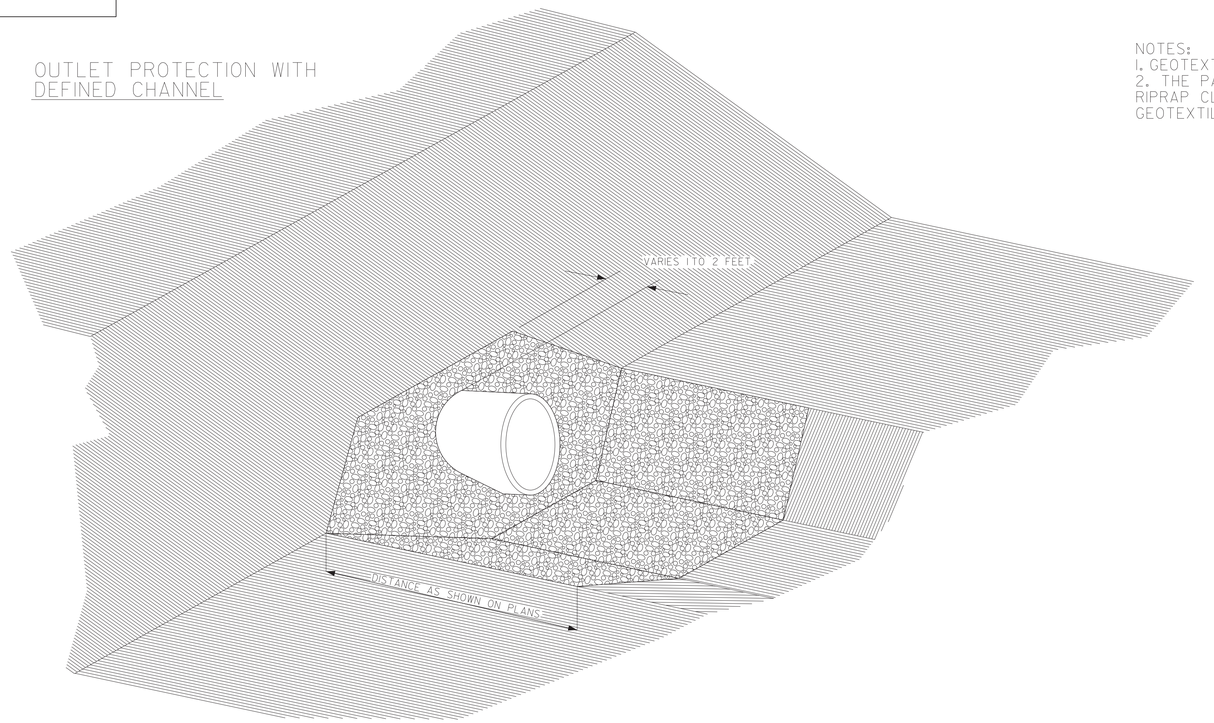
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
INLET FILTER DETAIL

NTS

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	D03	

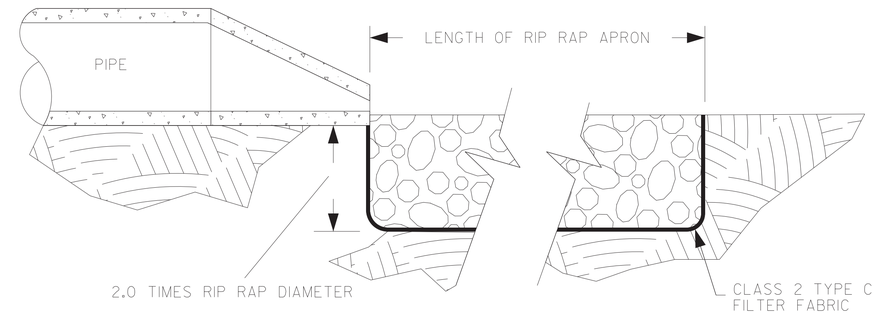
OUTLET PROTECTION WITH DEFINED CHANNEL



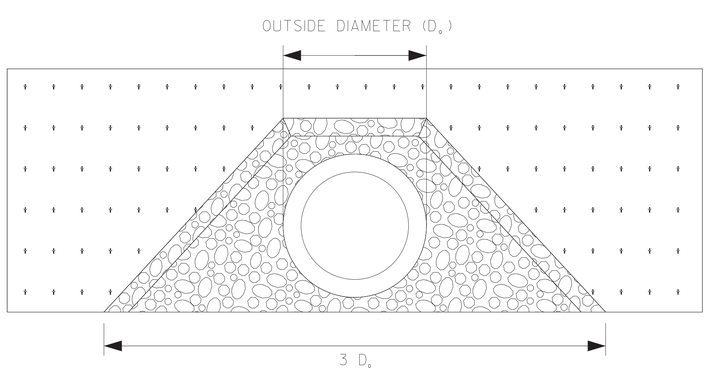
NOTES:
1. GEOTEXTILE FABRIC TO BE USED UNDER RIPRAP
2. THE PAY ITEMS SHALL BE:
RIPRAP CLASS __-__ TON
GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP CLASS 2 TYPE C S.Y.

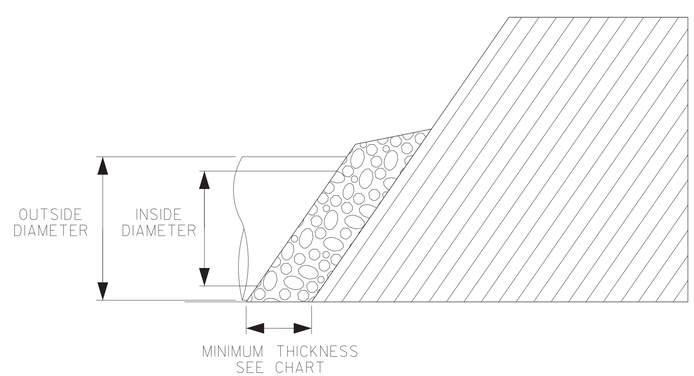
RIPRAP PLACEMENT WITH MINIMUM TAILWATER			
MINIMUM CLASS	D_{50} (FT)	MINIMUM THICKNESS (FT)	PIPE DIAMETER
A	0.50	1.00	UP TO 24"
B	0.75	1.50	UP TO 84"
C	1.30	2.60	LARGER THAN 84"

NOTES:
1) FIELD ADJUSTMENTS TO IMPLEMENT DETAILS MAY BE REQUIRED AND CAN BE APPROVED BY THE COUNTY RESIDENT CONSTRUCTION MANAGER OR THE PROJECT ENGINEER.



OUTLET PROTECTION WITH NO DEFINED CHANNEL





NOTES:
1. OUTLET PROTECTION WILL HAVE A WIDTH THREE TIMES THE OUTSIDE DIAMETER OF THE OUTLET PIPE AT TOE OF SLOPE

2. ADVANCE OUTLET PROTECTION UP THE SLOPE A MINIMUM OF 1 FOOT ABOVE THE PIPE INVERS

3. THE PAYMENT ITEMS MAY INCLUDE:

UNCLASSIFIED EXCAVATION	CY
TRM TYPE 1	MSY
TRM TYPE 2	MSY
TRM TYPE 3	MSY
TRM TYPE 4	MSY
RIPRAP CLASS A	CY
RIPRAP CLASS B	CY
RIPRAP CLASS C	CY
CLASS 2 GEOTEXTILE	SY

RIPRAP PLACEMENT WITH MINIMUM TAILWATER			
MINIMUM CLASS	D_{50} (FT)	MINIMUM THICKNESS (FT)	PIPE DIAMETER
A	0.50	1.00	UP TO 24"
B	0.75	1.50	UP TO 84"
C	1.30	2.60	LARGER THAN 84"

SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 2/15/18 No. 20214 GEORGE TILLEY BULL

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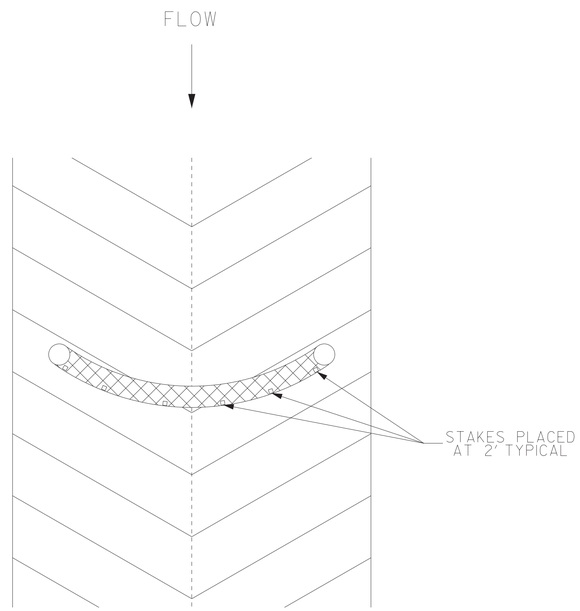
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE

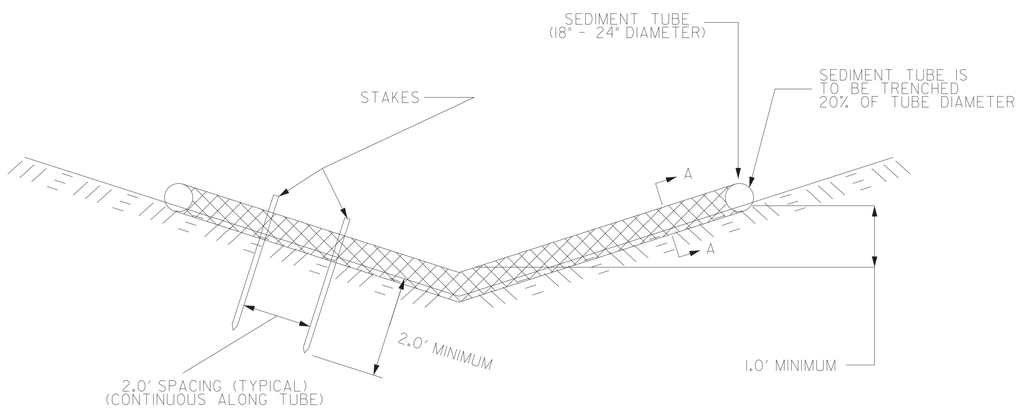
RIPRAP & GEOTEXTILE FABRIC DETAIL SHEET

NTS

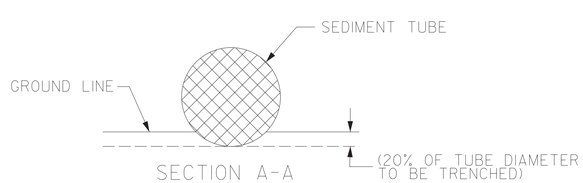
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	D04	



TOP VIEW OF DITCH



END VIEW OF DITCH



SECTION A-A

NOTES:

1.) PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE SEDIMENT TUBES ARE IN COMPLETE CONTACT WITH UNDERLYING SOIL. SEDIMENT TUBES ARE TO BE 18-24 INCHES IN DIAMETER AND ARE TO BE TRENCHED TO A DEPTH OF 20% OF TUBE DIAMETER. LAY THE SEDIMENT TUBE FLAT IN THE U-SHAPED TRENCH AND COMPACT THE UPSTREAM SEDIMENT TUBER SOIL INTERFACE. PLACE AND ANCHOR THE SEDIMENT TUBE ENDS SO THEY ARE POSITIONED UPSTREAM OF THE SEDIMENT TUBE CENTER POINT. SEDIMENT TUBES FOR DITCH CHECKS WEIGHING MORE THAN 18 POUNDS PER FOOT DO NOT REQUIRE TRENCHING.

2.) SEDIMENT TUBE SHALL BE INSTALLED IMMEDIATELY AFTER GRADING AND CONSTRUCTION. SEDIMENT TUBE SHALL BE MAINTAINED DURING SUBGRADE AND BASE PREPARATION UNTIL BASE COURSE IS COMPLETE. SEDIMENT TUBES MAY BE TEMPORARILY MOVED DURING CONSTRUCTION.

3.) SEDIMENT TUBES ARE TO BE INSTALLED PERPENDICULAR TO WATER FLOW AND EXTEND UP SIDE SLOPES A MINIMUM OF 1FOOT ABOVE DESIGN FLOW DEPTH. SPACE TUBES ACCORDING TO THE FOLLOWING TABLE:

SLOPE	MAXIMUM SEDIMENT TUBE SPACING
LESS THAN 2%	150 FEET
2%	100 FEET
3%	75 FEET
4%	50 FEET
5%	40 FEET
6%	30 FEET
GREATER THAN 6%	25 FEET

4.) STAKE SEDIMENT TUBES FOR DITCH CHECKS USING STAKES WITH A MINIMUM MEASURED DIMENSION OF 3/4" X 3/4" AND A MAXIMUM MEASURED DIMENSION OF 2'X 2'. OR USING STEEL POSTS (1.25 lbs/linear foot) A MINIMUM OF 4' IN LENGTH. USE STEEL POSTS WITHOUT A KICK PLATE AND PAINTING IS NOT REQUIRED. SPACE POSTS OR STAKES ON 2' CENTERS AND DRIVE THEM INTO THE GROUND TO A DEPTH OF 2' OR TO THE MAXIMUM EXTENT PRACTIBLE. INSTALL THE STAKES ON THE DOWNSTREAM THIRD OF THE SEDIMENT TUBE. SEDIMENT TUBES FOR DITCH CHECKS WEIGHING MORE THAN 18 POUNDS PER FOOT DO NOT REQUIRE STAKING.

5.) SELECT PROPER LENGTH OF TUBE TO MINIMIZE THE NUMBER NEEDED TO SPAN THE WIDTH OF THE DRAINAGE AREA. ON CONTINUOUS LENGTH IS PREFERRED COMPARED TO TWO OVERLAPPING TUBES. IF NECESSARY, SEDIMENT TUBES CAN BE LAPPED A MINIMUM OF 6 INCHES TO PREVENT PASSAGE OF FLOW AND SEDIMENT THROUGH FIELD JOINT.

6.) INSTALL SEDIMENT TUBES FOR DITCH CHECKS OVER BARE SOIL, MULCHED AREAS, OR EROSION CONTROL BLANKETS. KEEP SEDIMENT TUBES FOR DITCH CHECKS IN PLACE UNTIL FULLY ESTABLISHED VEGETATION AND ROOTS SYSTEMS HAVE COMPLETELY DEVELOPED AND CAN SURVIVE ON THEIR OWN.

7.) INSPECT SEDIMENT TUBES AFTER INSTALLATION FOR GAPS UNDER THE SEDIMENT TUBES AND FOR GAPS BETWEEN THE JOINTS OF ADJACENT ENDS OF SEDIMENT TUBES. INSPECT SEDIMENT TUBES EVERY 7 DAYS. REPAIR ALL RILLS, GULLIES, AND UNDERCUTTING NEAR SEDIMENT TUBES. REMOVE ALL SEDIMENT DEPOSITS THAT IMPAIR THE FILTRATION CAPABILITY OF SEDIMENT TUBES WHEN THE SEDIMENT REACHES 1/3 THE HEIGHT OF THE EXPOSED SEDIMENT TUBE.

8.) REMOVE AND/OR REPLACE INSTALLED SEDIMENT TUBES AS REQUIRED TO ADAPT TO CHNAGING CONSTRUCTION SITE CONDITIONS. REMOVE SEDIMENT TUBES WHEN THE FUNCTIONAL LONGEVITY IS EXCEEDED AS DETERMINED BY THE ENGINEER, INSPECTOR, OR MANUFACTURER'S REPRESENTATIVE. GATHER SEDIMENT TUBES AND DISPOSE OF THEM IN REGULAR MEANS AS NON-HAZARDOUS, INERT MATERIAL.

8.)REMOVE AND/OR REPLACE INSTALLED SEDIMENT TUBES AS REQUIRED TO ADAPT TO CHNAGING CONSTRUCTION SITE CONDITIONS. REMOVE SEDIMENT TUBES WHEN THE FUNCTIONAL LONGEVITY IS EXCEEDED AS DETERMINED BY THE ENGINEER, INSPECTOR, OR MANUFACTURER'S REPRESENTATIVE. GATHER SEDIMENT TUBES AND DISPOSE OF THEM IN REGULAR MEANS AS NON-HAZARDOUS, INERT MATERIAL.

9.)PRIOR TO FINAL STABILIZATION, BACKFILL ALL TRENCHES, DEPRESSIONS, AND OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF SEDIMENT TUBES.

10.) CLEAN OUT OF TUBES WILL BE PAID FOR AS SILT BASIN IN C.Y.

11.) PAYNEBT SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, MAINTENANCE, AND INCEDENTALS NECESSARY TO COMPLETE WORK.

12.) PAY ITEM SHALL BE:
SEDIMENT TUBE.....LF

NOTES:
1) FIELD ADJUSTMENTS TO IMPLEMENT DETAILS MAY BE REQUIRED AND CAN BE APPROVED BY THE COUNTY RESIDENT CONSTRUCTION MANAGER OR THE PROJECT ENGINEER.

SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER 2/15/18 No. 20214 GEORGE TILLEY BULLARD

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GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
SEDIMENT TUBE
DETAIL SHEET

NTS

PERMANENT SEEDING - COASTAL

SPECIES	LBS/Ac	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET BAHIAGRASS	10 LBS/Ac 40 LBS/Ac												
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 LBS/Ac 30 LBS/Ac 40 LBS/Ac												
BROWNTOP MILLET ATLANTIC COASTAL PANICGRASS	10 LBS/Ac 15 LBS/Ac PLS												
BROWNTOP MILLET SWITCHGRASS (ALAMO) LITTLE BLUESTEM SERICEA LESPEDEZA	10 LBS/Ac 8 LBS/Ac PLS 4 LBS/Ac 20 LBS/Ac												
BROWTOP MILLET WEEPING LOVEGRASS	10 LBS/Ac 8 LBS/Ac												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET BAHIAGRASS	10 LBS/Ac 40 LBS/Ac												
RYE, GRAIN BAHIAGRASS CLOVER, CRIMSON (ANNUAL)	10 LBS/Ac 40 LBS/Ac 5 LBS/Ac												
BROWTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 LBS/Ac 30 LBS/Ac 40 LBS/Ac												
BROWTOP MILLET BERMUDA, COMMON SERICEA LESPEDEZA	10 LBS/Ac 10 LBS/Ac 40 LBS/Ac												
BROWNTOP MILLET BERMUDA, COMMON KOBE LESPEDEZA (ANNUAL)	10 LBS/Ac 12 LBS/Ac 10 LBS/Ac												
BROWNTOP MILLET BAHIAGRASS BERMUDA, COMMON SERICEA LESPEDEZA	10 LBS/Ac 20 LBS/Ac 6 LBS/Ac 40 LBS/Ac												
BROWNTOP MILLET SWITCHGRASS LITTLE BLUESTEM INDIANGRASS	10 LBS/Ac 8 LBS/Ac PLS 3 LBS/Ac PLS 3 LBS/Ac PLS												

TEMPORARY SEEDING - COASTAL

SPECIES	LBS/Ac	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET RYE, GRAIN RYEGRASS	40 LBS/Ac 56 LBS/Ac 50 LBS/Ac												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET OR JAPANESE MILLET	40 LBS/Ac												
RYE, GRAIN OR OATS	56 LBS/Ac 75												
RYEGRASS	50 LBS/Ac												

SOUTH CAROLINA
DAVIS & FLOYD, INC.
No. C00538
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
2/15/18
No. 20241
GEORGE TILLEY BULL

DAVIS & FLOYD

SINCE 1954

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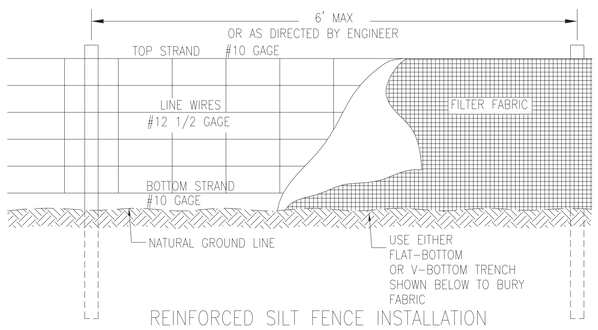
GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
SEEDING DETAIL SHEET

NTS

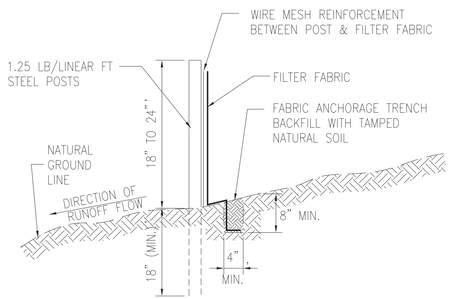
STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	D06	



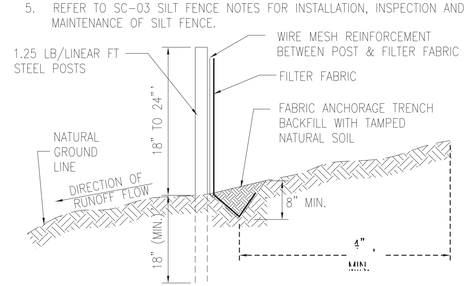
REINFORCED SILT FENCE INSTALLATION

REINFORCED SILT FENCE

1. WOVEN WIRE FENCE SHALL BE REQUIRED WHERE SPECIFIED AND AS A BACKING FOR FILTER FABRIC WITH AN ELONGATION AS DETERMINED BY ASTM D 1682, OF 50% OR GREATER. THE WIRE FENCE SHALL BE A MINIMUM OF 32 INCHES IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12 INCH STAY SPACING.
2. STEEL POST SHALL BE A MINIMUM OF 5 FEET LONG, WEIGH A MINIMUM OF 1.3 POUNDS/FOOT, AND HAVE PROJECTIONS FOR FASTENING THE WIRE OR THE FABRIC TO THE POST. STEEL POST SHALL ALSO HAVE A METAL PLATE DRIVEN TO THE PROPER DEPTH. THE PLATE WILL BE BELOW GROUND TO A DEPTH DIRECTED BY THE ENGINEER, WITH 1 TO 2 INCHES OF THE POST PROTRUDING ABOVE THE TOP OF THE WIRE FENCE OR FABRIC BEING IDEAL, BUT IN ANY CASE, NO MORE THAN 3 FEET OF THE POST SHALL PROTRUDE ABOVE THE GROUND.
3. FABRIC SHALL BE ATTACHED TO WOOD POST USING #9 WIRE STAPLES 1-1/2 INCHES LONG AND TO STEEL POST USING TIE WIRES. NUMBER AND LOCATION OF FASTENERS WILL BE AS DIRECTED BY THE ENGINEER IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC BUT IN ALL CASES, AFFIXED TO THE POST IN NO LESS THAN FOUR PLACES. THE FILTER FABRIC WILL BE TIED TO THE WOVEN WIRE FENCE AS DIRECTED BY THE ENGINEER IN SUCH A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC.
4. WHEN THE TEMPORARY SILT FENCE IS REQUIRED TO RUN NEXT TO AND PARALLEL WITH THE CONSTRUCTION FENCE, THE FILTER FABRIC MAY BE ATTACHED TO THE CONSTRUCTION FENCE INSTEAD OF INSTALLING A SEPARATE SILT FENCE. SEE DETAIL BELOW.
5. REFER TO SC-03 SILT FENCE NOTES FOR INSTALLATION, INSPECTION AND MAINTENANCE OF SILT FENCE.



FLAT-BOTTOM
TRENCH DETAIL



V-BOTTOM
TRENCH DETAIL

SILT FENCE DETAIL

WHEN AND WHERE TO USE IT
SILT FENCE IS APPLICABLE IN AREAS:

- WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100-FEET.
- WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V.
- THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS

STEEL POSTS

1. USE 48-INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:

   - COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
   - HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
   - WEIGH 1.3 POUNDS PER FOOT (± 8%).
   - HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES ATTACHED TO THE STEEL POSTS.
   - PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

2. USE STEEL POSTS WITH A MINIMUM LENGTH OF 4-FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE, STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW THE GROUND LEVEL FOR ADDED STABILITY. THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS:

   - BE COMPOSED OF MINIMUM 15 GAUGE STEEL.
   - HAVE A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES.

GEOTEXTILE FILTER FABRIC
FILTER FABRIC IS:
COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES. FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER. FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION. FREE OF DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES. CUT TO A MINIMUM WIDTH OF 36 INCHES.

USE ONLY FABRIC APPEARING ON SCDOT APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

INSTALLATION
EXCAVATE A TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP WHEN PLACING FABRIC BY HAND. PLACE 12-INCHES OF GEOTEXTILE FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT.BURY 12-INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAPPED THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6-INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24-INCHES. INSTALL POSTS A MINIMUM OF 1- TO 2- INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3-FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6-FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY-DUTY WIRE AT LEAST 1½-INCH LONG, SPACED A MAXIMUM OF 6-INCHES APART. STAPLE A 2-INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN CALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24-INCHES ABOVE THE GROUND. WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24-INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILL REMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4-, 5-, OR 6-FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE
INSPECT EVERY SEVEN CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES ½-INCHES OR MORE OF PRECIPITATION. CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY. REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE. REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) ARE NO LONGER NEEDED. PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.

DAVIS & FLOYD, INC. SOUTH CAROLINA No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 2/15/18 No. 20214 GEORGE TILLEY BLAKE

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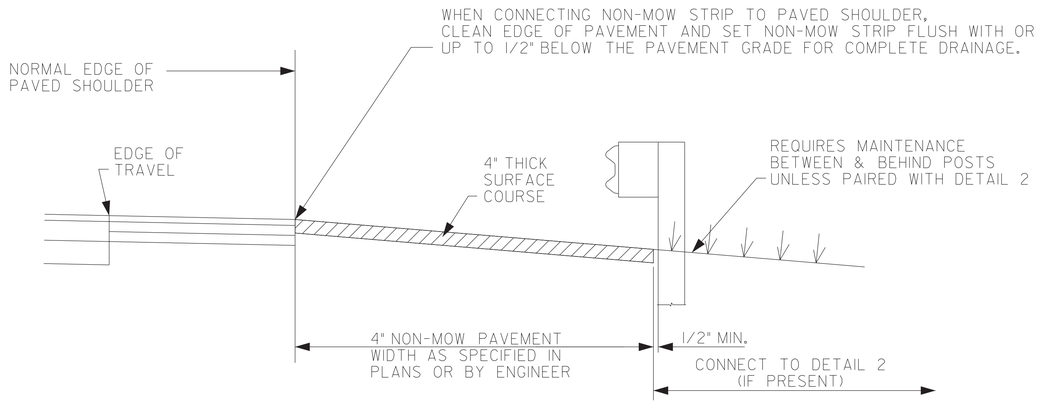
NORTH CHARLESTON, SC 29418
(843) 554-8102

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DGN. AMS DATE
R/W DATE
CHK. GTB DATE

GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM
PETIGRU DRIVE
SILT FENCE DETAIL SHEET
NTS

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	GEORGETOWN	31519.11	PETIGRU DRIVE	D07	



DETAIL 1

NON-MOW STRIP IN FRONT OF POSTS

NOTES:

1. INSTALL NON-MOW STRIPS UNDER GUARDRAIL ONLY WHEN SPECIFIED IN THE PLANS OR SPECIAL PROVISIONS

2. CONSTRUCT THE NON-MOW STRIP USING A MINIMUM OF 4" HMA SURFACE COURSE, 4" CLASS 2500 PORTLAND CEMENT, OR A PROPRIETARY NON-MOW STRIP PRODUCT IF APPROVED IN ADVANCE BY THE ENGINEER

3. FOR ASPHALT AND PORTLAND CEMENT STRIPS, PLACE LEAVE-OUTS AT EACH POST ALONG THE ENTIRE LENGTH OF THE GUARDRAIL INCLUDING TERMINAL AND TRANSITIONAL SECTIONS. INSTALL LEAVE-OUT DETAIL AS A CONTINUOUS STRIP THROUGH PORTIONS OF RAIL WITH 1'-6.75" (CRITICAL OFFSET) POST SPACING.

4. PROVIDE AT LEAST 7 INCHES OF LEAVE-OUT BEHIND EACH POST. FILL LEAVE-OUTS WITH NO MORE THAN 2 INCHES OF LOW STRENGTH GROUT OR FLOWABLE FILL.

5. LOCATE THE NON-MOW STRIP ALONG THE ENTIRE LENGTH OF THE GUARDRAIL AND EXTEND 5' BEYOND THE LEADING AND TRAILING END TREATMENT IMPACT HEAD/FLARE END/NOSE/ETC OR TO THE LIMITS SHOWN IN THE PROJECT PLANS.

6. IF DETAILS INCLUDE NON-MOW STRIP CONNECTED TO PAVEMENT, USE ONLY MATERIALS COMPATIBLE WITH ROADWAY PAVEMENT.

PROPRIETARY MATERIALS

P1. FOLLOW THE MANUFACTURER'S INSTALLATION INSTRUCTIONS TO COVER THE SAME GEOMETRY SPECIFIED IN THE PAY ITEMS.

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GEORGETOWN COUNTY
ENGINEERED ROADS PROGRAM

PETIGRU DRIVE
PAVING UNDER GUARDRAIL
DETAIL SHEET

NTS